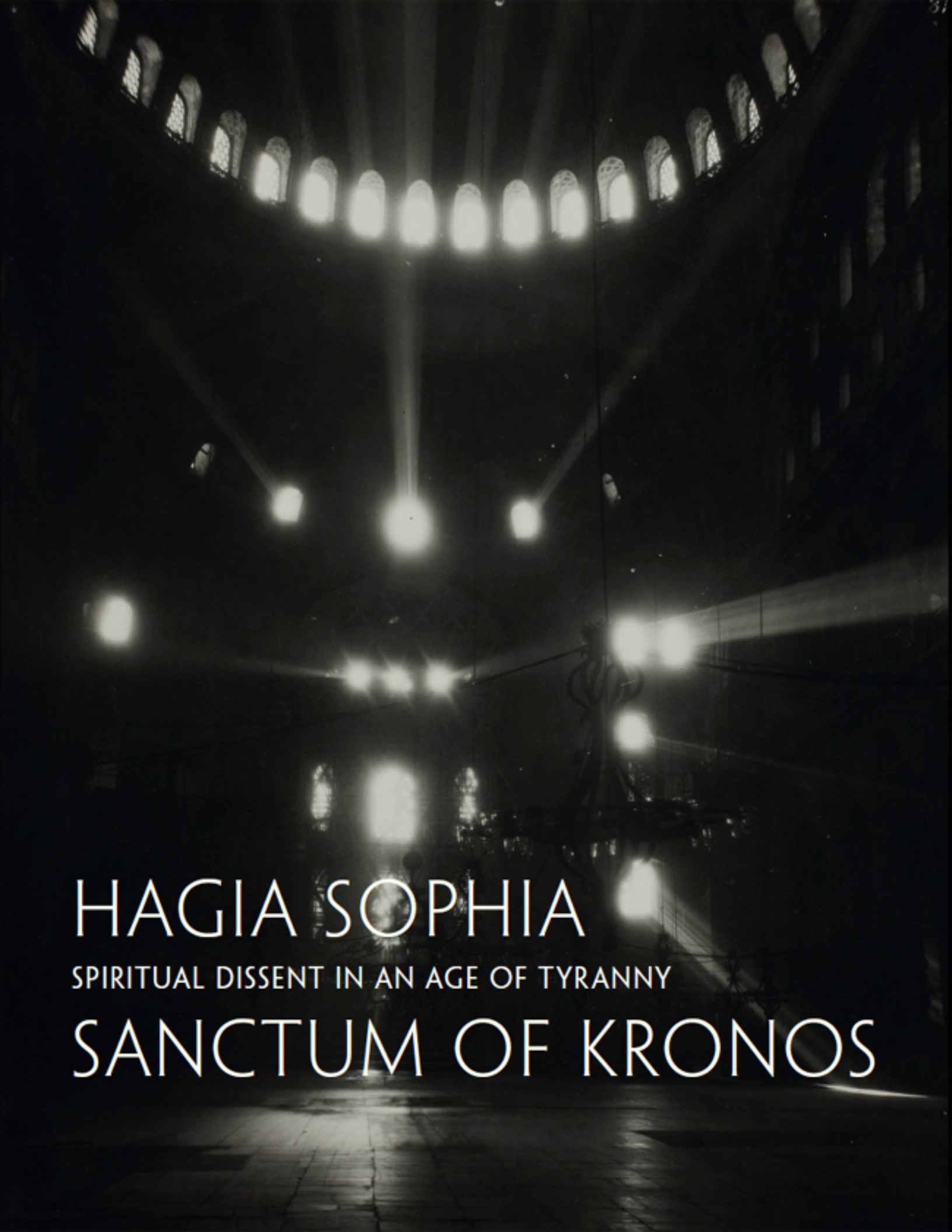
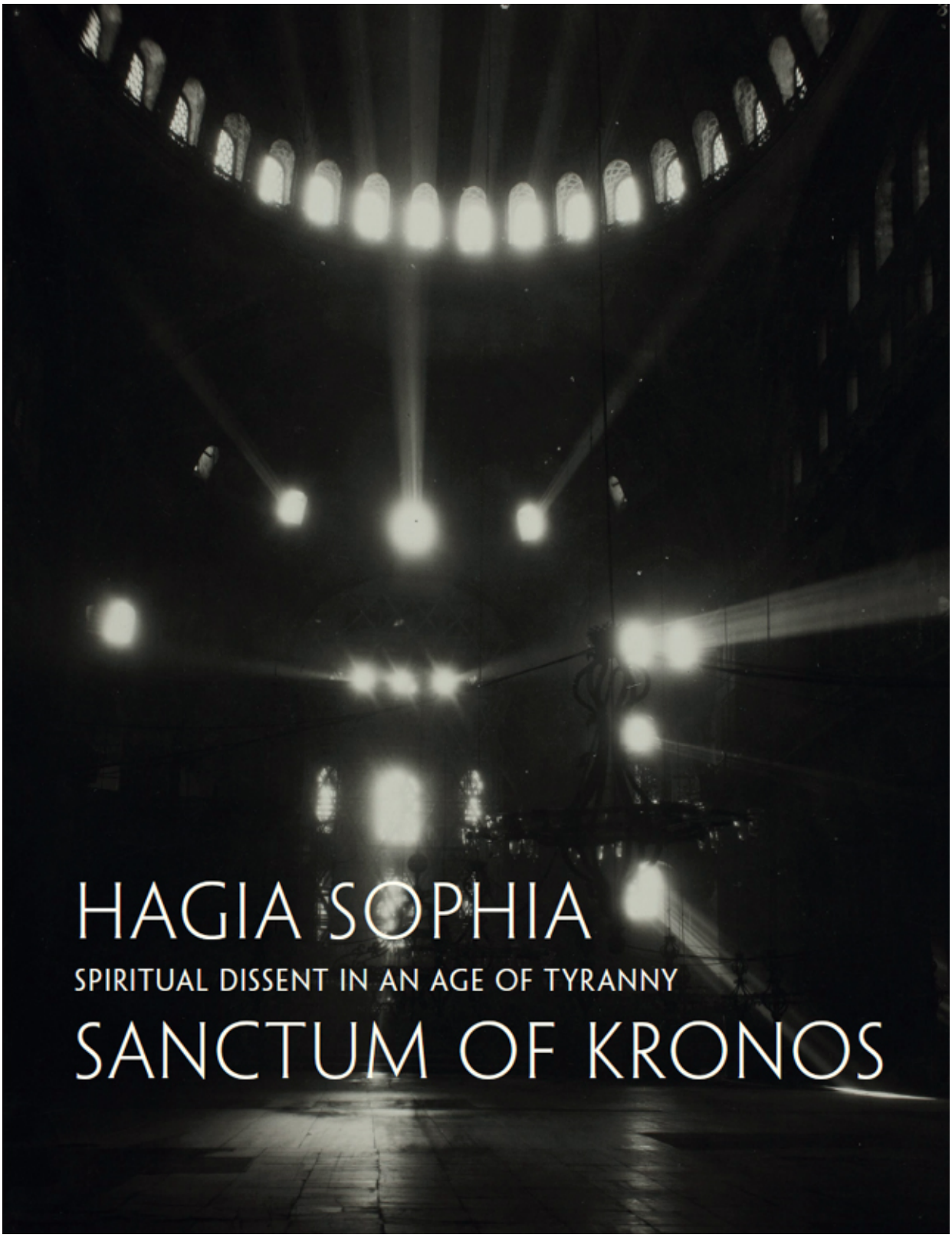


HAGIA SOPHIA

SPIRITUAL DISSENT IN AN AGE OF TYRANNY

SANCTUM OF KRONOS


HAGIA SOPHIA
SPIRITUAL DISSENT IN AN AGE OF TYRANNY
SANCTUM OF KRONOS

Hagia Sophia / Sanctum of Kronos

Peter Mark Adams

HAGIA SANCTUM OF SOPHIA KRONOS

Spiritual Dissent in an Age of Tyranny

SCARLET IMPRINT · MMXXIII

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We who set out on this pilgrimage
looked at the broken statues
became distracted and said that life is not so easily lost
that death has unexplored paths
and its own particular justice;

George Seferis, *Mythistorema* 21
(translated by Edmund Keeley)

Dedicated to the memory of my mother
Marie Adams, née Edwards (1928–1968)

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ILLUSTRATIONS

The following images are from the series *Hagia Sophia, study of light*, possibly photographed by Pierre Iskender. By kind permission of the Byzantine Institute Dumbarton Oaks fieldwork records and papers, Dumbarton Oaks, Trustees for Harvard University, Washington D.C.

frontispiece View of the naos from the floor to the main dome Diagonal
view of the naos from one of the exedra
View of the naos from the outer narthex
View of the naos from the gallery
View into apse
South aisle, looking east
South aisle, looking east
Light from northwest exedra
Portions of the main dome, semi-dome and pendentive

The following images are from Van Nice, Robert L. *Saint Sophia in Istanbul: An Architectural Survey*. [1965–1986]. By kind permission of the Dumbarton Oaks Research Library, Washington, D.C.

General plan at ground level (plate 1)
Section of the building's longitudinal axis, looking south (plate 34b)
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South elevation, apse shell, east semi-dome and dome (plate 38)
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With thanks to Helge Svenshon for figure 1, a reconstruction of the basic geometry.

Photographs of the gold tesserae (endpapers) and of the marble revetment and emblemata of Poseidon (figures 3–11 & 13) by Murat Pulat.

those who had good courage,
three times on either side of death,
kept their hearts untarnished of all wrong,
travel along the road of Zeus to Kronos' tower.
There round the Islands of the Blessed,
the winds of Okeanos play,
and golden blossoms burn,
some nursed upon the waters,
others on land on glorious trees;
and woven on their hands
are wreaths enchained and flowering crowns,
under the just decrees of Rhadamanthus,
who has his seat at the right hand
of the great father,
Rhea's husband, goddess
who holds the throne highest of all.

Pindar, *Olympian* 2
(translated by G. S. Conway)

INTRODUCTION

I have lived within sight of the Hagia Sophia for over thirty years, in this sense it has been my daily companion; the beacon of a high spiritual culture that serves to restore the innermost spirit; an established landmark around which a life can re-orientate and organise itself. I have lost count of the number of times that I have stood, wonderingly, before its precipitous faces, its mounting buttresses, soaring surfaces, and cascading forms; and of the many hours I must have spent contemplating its structural and decorative design; each encounter adding to my absorption of its accretion of styles, its complex layers of detail.

The interior is austere; disorientating in its complexity of domes; disturbing in its reverberant acoustics, and by turns, blinding and deeply shadowed in its diffusion of light. The sense one has is of an edifice pitched, uncompromisingly, towards some otherworldly order abutting a rarefied dimension of significance beyond the merely human. For the building imposes itself upon the visitor in a way that is seldom encountered today. It is possessed of its own distinctive atmosphere, a frisson or feeling-tone at once sublime but at the same time, quite alien; and it was this, this indisputable phenomenologically attested sense of the extraordinary

occluded beneath the accretions of its various identities, that bid me commence the present project; that of exploring its metaphysical origins.

As with all my projects, at the outset I did not know whether or not it would bear fruit; whether it was going to be worth the time and effort spent on it. Nevertheless, following my instincts, and the clues as they presented themselves to me, step by step, I started out on a path that grew more complex, and more intriguing, than I could ever have imagined. This work is the result of that heartfelt search, that patient detective work whose imaginative and scholarly leaps, sudden insights and emergent understanding, were generated from hours, weeks and months spent both in situ and patiently doing the background research.

The building stands at one of those watershed moments in human cultural history when a polytheistic, spiritually tolerant Hellenism was jettisoned in favour of an imperially sanctioned, state-monitored and judicially enforced belief system that triggered centuries of religious strife and oppression. In examining its origins, and its deeply occluded narratives, we each take our own steps towards the recovery and restoration of those more enlightened times.

I am not interested in recounting the history of this edifice; my objective is to restore and seek to understand the original thematic conception of its designers up to the point of its inauguration, long before the first major remodelling of its main dome (which took place in 558 CE, the first of a series). In other words, our mission is to consider the building from its inception in 532 CE to its completion in 537 CE. In order to accomplish this I first had to carefully disinter this original design from the fifteen hundred years of appropriation and reinscription, from the many botched restorations and redecorations; not to mention the addition of major structural features to its exterior. To this end I had to become familiar with the history of the building and so able to distinguish between the various interventions by their signature styles. As a result, we can now focus

directly on the key elements that are germane to understanding the designer's originary conception.

Constructed fifteen hundred years ago, the building remains one of the world's iconic edifices. Standing at the intersection of some of the most significant physical and cultural seismic zones, the question of its identity, and therefore its significance, remains problematic, contested, and, to a degree, indeterminate. I would like to suggest, however, that it possesses a hidden, originary identity; one that underlies all of its other, later, accretions. The possibility of the existence of such an identity is related to certain architectural features that are otherwise difficult to account for and that point to the existence of a deeper, richer, Hellenistic cultural milieu inhering in the structural and decorative design. Historically, architecture was always the mediator between these interlocking domains of meaning; and as such maintained an integral relationship with such apparently disparate disciplines as metaphysics, mathematics, astronomy, astrology, music and the healing arts. Sacred structures were designed to incorporate the energies arising from specific materials, celestial and topographic alignments in order to facilitate ritually mediated outcomes – the interleaving of the sacred and the profane – an outcome that justified, and far outweighed, the mobilisation of resources and community effort necessary for its realisation. Our approach to this subject matter can be described as broadly ethnographic in that it concerns itself with an ethnography of the spiritual, and in part esoteric, world of Hellenism in late antiquity; a world that suffered violent oppression, its metaphysical outlook and spiritual practices criminalised, its practitioners variously exiled, tortured or executed and of course, its texts burned. As a result of these depredations, we have only inherited the imperially sanctioned narrative concerning the building's purpose. It is this narrative that we are about to challenge, counter-mapping its control over our conception of the history of belief.

Counter-mapping refers to the generation of countervailing narratives; narratives that run against the prevailing current of institutionalised opinion. In counter-mapping one of the most iconic buildings of all time, it

is my contention that it embodies an outlook and worldview entirely at odds with its purported function at the time of its construction; and that it in fact embodies an essentially Hellenistic esoteric, spiritual and metaphysical worldview; and in a form that would have been considered talismanic – capable of actively propagating its encoded vision for all time and irrespective of whether it was consciously understood. Its 'influence' has certainly been felt by countless visitors ever since.

The point, however, is not merely a historical one. Under conditions of absolute tyranny, governance spontaneously generates its own opposition; minority voices that refuse to be silenced or drowned out, but rather seek through an engagement with 'infrapolitics' to make themselves heard and to continue to represent and manifest a culture of pluralism and tolerance. What is true for the general population is even more so for those imbued with a profound sense of spiritual mission, as the early history of Christianity attests. People possessed of a clear and distinct set of beliefs are prepared to do everything in their power to continue bearing witness to them and to ensure their preservation, often, irrespective of the consequences. For whilst scholarship tends to wrongly frame 'Neoplatonism' as merely 'intellectual Hellenism' the traditions associated with Iamblichus and Proclus were not exercises in metaphysical speculation for its own sake. Both traditions were, rather, attempts to develop systems that afforded the opportunity for direct, epiphanic experience and to articulate the experiences of the ineffable arising from these ritually facilitated encounters, They were, in other words, the direct, lineal descendants of the ancient mystery cults.

The questions that this text posits, and which constitute its spiritual subtext, are: how do we account, spiritually (and hence esoterically) for tyranny? What is its underlying spiritual nexus? And what, under conditions of tyranny, constitutes an appropriate – spiritually informed – response to it? I do not pretend to have answers to any of these questions, but rather seek only to explore just such a historical age; and how those issues were, in fact, faced and what the consequences were over the larger, millennia long cultural and intellectual horizon. As such this work stands as

a prequel to *The Game of Saturn* – establishing the starting point, the initial trajectory, so to speak, of a tradition whose history continued into and through the Renaissance and on into the present day.

Amongst these 'minor,' that's to say, sidelined, historical voices are those of the Hellenistic female theurgists and philosophers. Indeed, viewed from a performative perspective, without the contribution of such women as Aedesia and more especially, Asclepigenia – the hereditary lineage holder of the initiatory tradition of Eleusis who provided the initiations and theurgical training undergone by Proclus and the others until her death in 485 CE (in the same year as Proclus) – there would be no line of initiated and theurgically inspired theurgist-philosophers (the so-called *díadochí* or 'successors') such as Proclus and Damascius; indeed, there would be no 'school of Athens' and nor would there have been a Hellenistic Athenian esoteric tradition in late antiquity worthy of that name.

With regard to the scope of the present work it covers the Hellenistic world of late antiquity though centred upon the metaphysical preoccupations, initiatic and theurgical practices of the school of Athens between the late-fourth century CE and the early decades of the sixth century as these are embodied in the greatest building of that – or most other – ages before the onset of modernity. Although this intellectual world is commonly encompassed by the term 'Neoplatonism,' I have deliberately avoided using it. For one thing, coined by nineteenth century philologists and predicated almost exclusively upon a modernist philosophical understanding of Plato's dialogues, its outlook is essentially reductionist with respect to his successors' actual lives and interests. More importantly, it has been either uncomprehending or dismissive of the performative, ritual dimension of their intensely spiritual lives – the one feature of the school of Athens that its members extolled above mere philosophy. As a label, as a form of shorthand perhaps, it serves a purpose; but it does so at the cost of distorting the spiritual beliefs, interests and practices of those so designated. Instead I have employed throughout the terms 'Hellenistic' and 'Hellenists' as more accurate designators of the actual spiritual life and outlook of the age's non-Christian theurgists and metaphysicians; 'pagan'

to indicate the traditional religious practices of the rural population; and 'philosophy' to indicate such traditions as stoicism, epicureanism, Aristotelianism that were strongly represented in the same educational space as the school of Athens.

Amongst the Hellenists, the figure most frequently cited is Proclus Diadochus (the successor), the scholarch or head of the school of advanced Hellenistic studies in Athens for some forty-five years; a commanding presence who was not only one of the leading Hellenistic philosophers of the age, but a dedicated practitioner of traditional Hellenic devotional ritual as well as the more ascetic practices denominated under the umbrella term 'theurgy.' Numerous studies exist covering his substantial body of writings in great detail from both a historical and philosophical perspective; it forms none of our project to rehearse this information once more. Rather, we are interested in the performative aspects of the school's life – in its spiritual disciplines and practices and what they tell us about the system of spiritual belief that motivated some of the age's brightest and most devout intellects who, generation upon generation, travelled from far and wide to study at the school in Athens. In other words, we are interested in understanding the school from the perspective of its being a spiritual community with a definite spiritual agenda, an agenda that we will see fully manifested in the structural and decorative design of the Hagia Sophia.

On the use of 'aniconic' in relation to the Hagia Sophia's decorative scheme

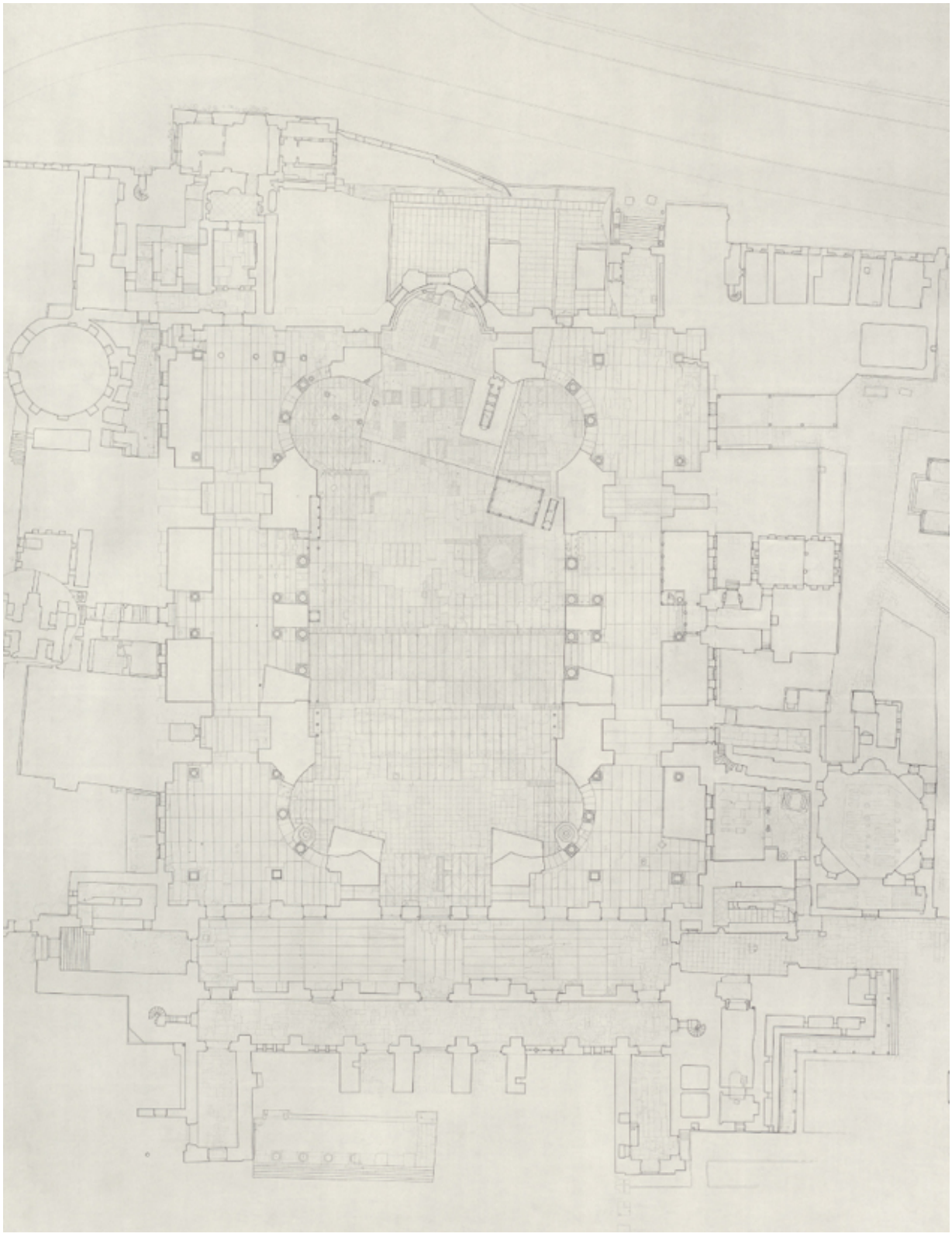
Perhaps the most frequently encountered word in connection with the Hagia Sophia's decorative scheme is the descriptor 'aniconic,' a portmanteau of the Greek negative prefix 'an' and 'iconic' (deriving from the Greek *eikon* for 'image'). Despite appearances to the contrary, 'aniconic' is not actually a Greek word; and nor does it have a connection with, or place within, the language of traditional Hellenic visual culture.[I] Rather, its origins lay in the nineteenth century, along with such terms as

'animism' and 'totemism' – the conceptualisations by which Western anthropologists sought to make sense of cultures different from their own. Coined by the nineteenth century German archaeologist Johannes Overbeck, 'aniconism' served as a label for a theory that hypothesised an evolutionary trajectory of religious objects from non-figurative representations of the divine to the final emergence of a fully figurative religious art. Such is its academic currency we now find it employed as a synonym for 'non-figurative' religious art generally. Both of the more recent scholarly studies of the Hagia Sophia concur in employing the word in this way: 'the original sixth-century mosaic decoration of Hagia Sophia was aniconic (non-figurative)'[2] and 'the monumental program decorating Hagia Sophia's Justinianic interior was aniconic, eschewing the human figure.'[3]

In opposition to this general usage, Milette Gaifman has proposed reverting to the original formulation – but without its attendant evolutionary theory – whereby 'aniconism' is used to 'denote divine presence without a figural image in religious practice, in the visual arts, and in visual culture more broadly.'[4] We therefore need to remain mindful of the distinction between a general use of the word, as a synonym for 'non-figurative,' and Gaifman's narrower, more technical definition as a non-figural representation of 'divine presence.' The point of this aside, apart from seeking clarity across the various texts involved in describing sacred spaces, is to more clearly identify the conceptual implications of the terms used to describe the Hagia Sophia; and how they shape our perceptions and the conclusions that we draw from them.

Considered as a whole, the book-matched floor and marble revetment of the Hagia Sophia cannot be described as 'aniconic'; they have been assembled to support three distinct aesthetic regimes: one purely decorative; another symbolic and a third that is, if only marginally, figurative. Leaving aside the 'decorative' panels, the book-matching process has been systematically employed to produce a symbolic representation of a sea and rivers (the vast marble floor), on one hand; and distinct arachnid and daemonic figural motifs (in the revetment), on the other.

Finally, given that the architectural and decorative design were carefully, and expertly, fashioned to produce a golden-hued light within the vast naos and to allow the sound of the large choirs (evidenced by the choir stalls set at various heights in the building's dome, semi-domes and exedrae) to reverberate in a cascading flow of sound from the marble floor and revetment; we can say that the net effect of the building's design is aniconic in the strong sense – it has been specifically designed to provide a multisensory experience of the immanence of a divine presence.



PROLOGUE

> In the twenty-eighth year of his reign Constantine re-dedicated the city of Byzantium as Constantinople. The ritual involved walking, spear in hand, to mark off the city's new boundary. Thinking he was measuring out too large an area, one of his attendants asked, 'How much further, O prince?' and the emperor answered, 'until he who goes before me comes to a stop.'
>
> – Epitome of Philostorgius, 4th–5th century CE[1]

On Monday, the 4th of November 324 CE, following that invisible guide and subject to the disciplinary regime of an archaic ritual, the Emperor Constantine commenced the rededication of the enlarged area of Byzantium – henceforth to be called Constantinople – to the ancient goddess Anthousa-Tyche by conducting the *polismós* (Lt. *limitatio*), the ritual enacted to establish its new identity through the revision of its sacred boundary. According to the sixth century CE courtier and antiquarian, John of Lydia,[2] Constantine was assisted by the Roman *augur* and hierophant, Vettius Agorius Praetextatus, and the Hellenistic philosopher, Sopater of Apamea, a disciple of Iamblichus[3] and close advisor to the emperor for nearly a decade.[4] As his educated Hellenistic audience would have been

well aware, as Proconsul for Achaea, Praetextatus went on to become a defender of the mysteries of Eleusis[5] and a leading figure in the so-called 'pagan revival' of the fourth century CE. His sacred *cursus honorum*[6] (ladder of offices) serves to highlight the depth of his commitment to both Hellenistic and Roman sacred traditions, and perhaps more particularly, to their most esoteric expression – the sacred mystery cults dedicated to the gods,

> *augur*, priest of Vesta, priest of the Sun [Helios], *quindecemvir* [a priest of the College who interpreted the Sybilline books], *curialis* of Hercules, initiate of Liber [of Dionysus] and Eleusis [of the mysteries of Demeter and Persephone], hierophant [priest of Hecate of Aegina], *neocorus* ['temple keeper' of Serapis, an honorific], *taurobolíatus* [initiate of the mysteries of Magna Mater], father of fathers [Pater Patrum, a Mithraic honorific for the highest grade of Mithraic initiate].[7]

Sopater of Apamea, for his part, could not but be considered representative of the tradition of Hellenistic mysticism associated with Iamblichus and the body of ritual practices known as 'theurgy' involving the invocation of, and possession by, the ancient gods. It is difficult to imagine two participants more representative of the traditional world of Greco-Roman polytheism who also enjoyed close ties to both the city and the emperor.

John of Lydia's narrative serves to underline both the parallel, and an underlying continuity, between Constantinople and Rome via the rite of augury by which Romulus established that city.[8] Augury – divination through the observation of a flight of birds within a specific area of the sky, designated the *templum*[9] – was employed alongside elective astrology, and devotional and sacrificial rites to affect a fundamental transformation in metaphysical status, to in-*augur*-ate the new,

> Augural expertise, therefore, concerned not just the interpretation of signs but the demarcation of religious space and its boundaries … a

> system of categorizing space both within the city and between the outside world …[10]

Proceeding with the *polismós*, Constantine decreed that the archaic temples standing on the city's ancient acropolis should be retained.[11] They remained throughout his reign and that of all subsequent emperors up to the time of Theodosius I, who had three of the temples converted to other uses.[12] In addition, Constantine decreed that the most significant statues of gods, goddesses and heroes throughout the Greco-Roman world should be brought to adorn the city's buildings, porticoes and forums. A year and a half later, on Monday 11th May 330 CE, the dedication of the city was celebrated and commemorated with special coins depicting Sol Invictus and,

> another statue of himself in gilded wood, bearing in its right hand the archaic Tyche [goddess of Fortune] of the city, itself gilded, which he called Anthousa.[13]

In a newly built and decorated forum, in the centre of the city named after himself, Constantine raised a tall column made from Imperial Porphyry – a hard purple stone quarried from an exclusive source in the Egyptian desert – on top of which a large bronze statue of Apollo, sequestered from Phrygia, was mounted, eliding the emperor's identity with that of the archaic Hellenic sun god Helios-Apollo, in thanks for, and commemoration of, the realisation of the successes promised him during an epiphany of that deity and the goddess Nike (Victory, an aspect of Athena), twenty years earlier (310 CE). We find this encounter described in an anonymous panegyric wherein Constantine, returning after his successful campaign against Maximian, turned aside from his route to pay his respects at a temple of Apollo [Apollo Grannus][14] and to give thanks for his recent success and good fortune,

> You had turned aside toward the most beautiful temple in the whole world, or rather, deity made manifest, as you saw. For you saw, I believe, O Constantine, your Apollo, accompanied by Victory [Nike], offering you laurel wreaths, each one of which carries a portent of thirty years … you saw, and recognized yourself in the likeness of him to whom the divine songs of the bards had prophesied that rule over the whole world was due.[15]

On a mundane level, the panegyric's observation that Constantine identified with the god appears as no more than imperial hubris; and yet when we restore the context, the idea takes on another order of significance. We earlier noted the important role of Sopater of Apamea as the emperor's closest advisor for a decade; we also noted that Sopater was a disciple of Iamblichus (c.245 to 325 CE) one of the greatest promulgators of a performative, mystery-like Hellenistic ritualism. The spiritual framework attributed to Iamblichus encompassed seven steps subsumed under the title the 'Ladder of Virtues' culminating in the hieratic or theurgic virtue of *henosis* or union with a deity. Now the penultimate spiritual discipline (and its corresponding virtue) is the exercise of the 'paradigmatic virtue,' the aspirant's identification with and modelling of the deity's most defining qualities and attributes. From the time of his experience of an epiphany of the god, Constantine's coinage had borne a dedicatory image of the Sun, the defining symbol of Apollo.[16] Twenty years later, both Apollo and Athena continued to possess a special resonance for the emperor, as attested by the prominence accorded to these deities in his inauguration of the city. In addition to the towering porphyry column bearing the bronze statue of Helios-Apollo (a portion of whose column remains in situ),

> Constantine secretly removed the wooden statue known as the Palladion from Rome and placed it beneath the column which supported his statue.[17]

The Palladion, an archaic wooden *xoanon* of Athena, was reputed to have been carried to Rome by Aeneas after the sack of Troy and to be central to that city's continued safety; its removal by Constantine therefore implied the abandonment of Rome to its fate – a fact that helps to explain the secrecy attending its removal. In just one instance of this import of statues some eighty bronze statues were placed on display at the Baths of Zeuxippos, set between the imperial palace and the Hippodrome.[18] The Hippodrome itself was decorated with the tripod of Delphian Apollo (brought from Delphi, it is now referred to as the 'Serpent Column,' the surviving portion of which remains in situ to this day); and a temple of the Dioscuri (Castor and Pollux), deities called upon by sailors for their control of the trade winds,[19] an eminently suitable choice in this sea-girt city.[20] In its turn, he had two temples erected in the Agora (the market place); one to the ancient Anatolian goddess, the Dindymenian Mother of the Gods; the other to Tyche (Fortune).[21] The goddess of Mount Dindyma was the most proximate of the archaic Anatolian mountain goddesses to the land of the Doliones. Jason and the Argonauts sought atonement from her after inadvertently killing their host, King Cyzicus.[22] Tyche, as a daughter of Oceanus, a protector deity (whose hand, as Pindar avers, 'steers the ships of ocean on their flying course, and rules on land the march of savage wars, and the assemblies of wise counsellors'[23]) demonstrates, once more, an appropriate choice to oversee the sea-bound city's prosperity and safety.

All of these new temples and statues, clustered in and around the complex formed by the hippodrome, *agora* and palace, complemented the already rich presence of temples and altars on the city's ancient acropolis a short distance away. There the archaic temple of Poseidon – the father of Byzas, the city's founder – overlooked the confluence of the Golden Horn and the Bosphorus where to this day dolphins, sacred to that god, can be seen breasting the waves; alongside stood temples of Apollo, Athena, Artemis and Aphrodite.

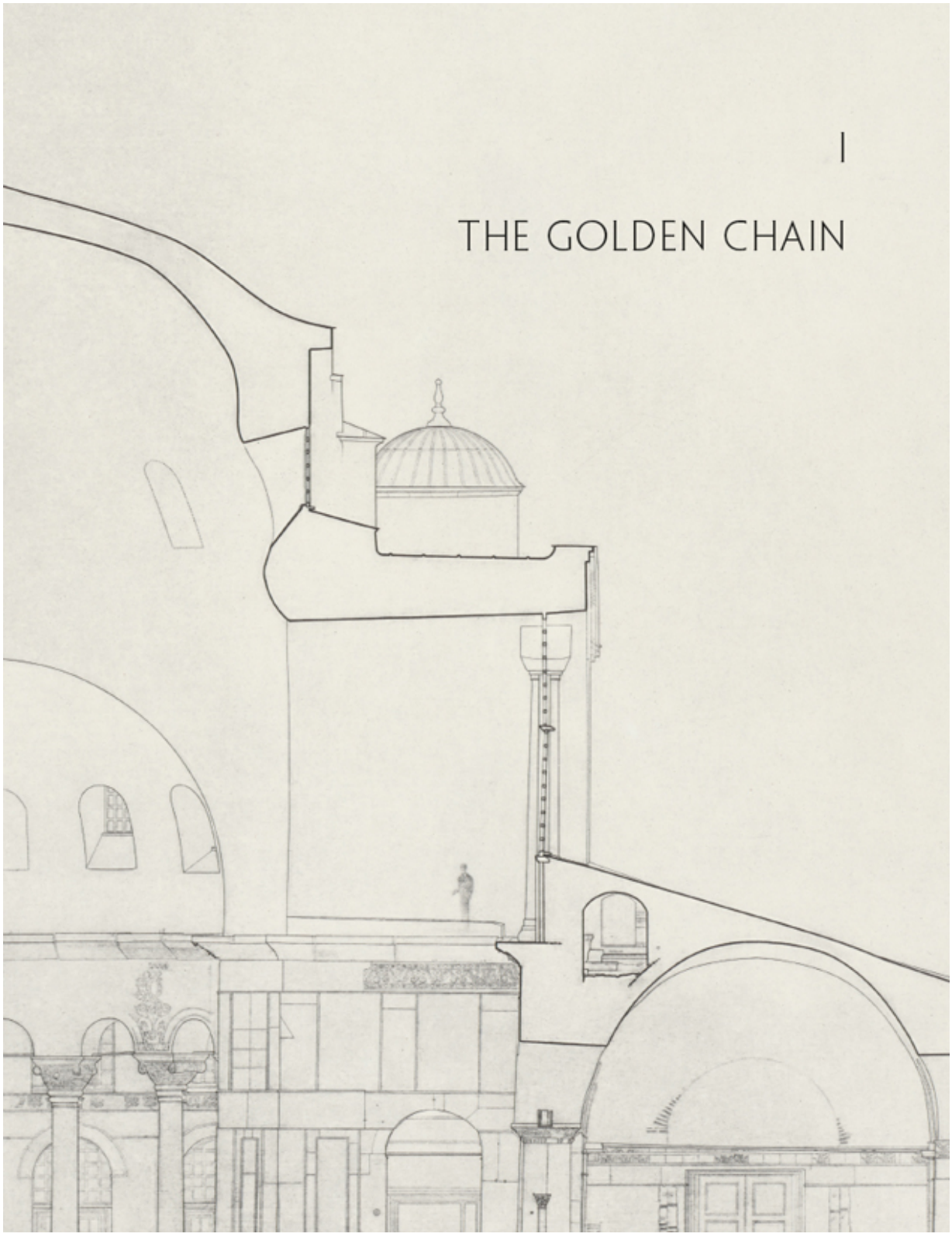
The city's temples and statues were, predominantly, dedicated to various manifestations of the goddess, and in particular, Athena; described by Marinus, a *scholarch* of the school of Athens and Proclus' biographer, as the Constantinopolitan patron or protector goddess, Athena Poliouchos, goddess of Wisdom.

The practice of collecting important statues for display in the capital from around the Empire continued through the reigns of all of the subsequent emperors and into the reign of Justinian in the sixth century CE. The efficacy attached to the statues was such that, as late as the ninth century CE, the emperor, Basil I, had a statue modified to represent himself and buried as a foundation sacrifice in a new church, the Nea Ekklesia.[24] The statues distributed throughout the city were believed to be imbued with *daemones* that provided a channel of communication between the population and the numinous realms wherein the statues both responded to imminent dangers and could, in turn, be manipulated to guard against or even reverse their outcome. They are recorded as playing a significant role in war as well as peace as late as the thirteenth century;[25] a tradition that persisted in the city until its sack at the hands of the Fourth Crusade in 1204.

The themes that emerge from the fourth century CE – the profound continuities of Hellenistic culture and tradition, the need to resort to archaic rituals to articulate, structure and enact the demarcation, and hence transformation, of space – all foreshadow the central theme of this work: the culturally situated production of sacred space in the architecture of the sixth century Hagia Sophia, erected in Constantinople between 532 and 537 CE.

I

THE GOLDEN CHAIN



SACRED STRUCTURE
INEFFABLE SPACE

Despite the passage of some fifteen hundred years, the Hagia Sophia still engenders a passionate response, exerts the atmosphere peculiar to the massif; imposes upon the visitor by virtue of its sheer scale, its commanding presence; but to enter is to experience another type of space, one quite unlike any other; it is to encounter the natural chiaroscuro of its vast vault – the intense interplay of bright light and deepest shadow interfused with the sounds that arise from its unique acoustic signature.

The marble floor, a composition of book-matched grey-veined white Proconnesian marble, is a rippling body of water that stretches to the limits of sight. Above, from the framed panels of the variegated marble revetment, hybrid figures assert a watchful presence; interspersed by soaring columns of Thessalian Green and Imperial Porphyry that, towering above, morph into involute foliate forms; whilst the light channelled through the vault's vast emptiness casts intense beams, catching the fabric here to reveal the dazzle of gold tesserae, there the azure glow of the dome's high sills; reminders of the structure's intricate geometry, its sculpted forms even enroll the vastness of the illuminating sky to serve them. Here highlights and deep shadows sculpt a space whose arching

vastness, the complexity of its semi-domes, generates a natural sustain, a never-ending resonance, that serves to unbalance and confuse our senses. It is as though one's awareness were being drawn, ineluctably, Marsyas-like, out of one's body. Despite its age and appropriation by a succession of conflicting discourses the building retains its essential grandeur. We are confronted by a larger presence, but what that presence portends remains a puzzle, an architectural and spiritual cipher.

The dominant discourse of any age seeks to shape the past into its own most desired reflection; each appropriation occasioning fresh efforts to erase and reinscribe the building's glacial surfaces, like some vast palimpsest. It is therefore difficult, today, to discern the architectural purity of its original skyline or to grasp the fullness of the illumination that bedazzled its earliest chroniclers; so overrun has it become by centuries of devotional overlay; botched restorations; the urgent need to shore up its shifting bulk with light-obscuring buttresses; the dulling of its interior reflectivity due to the loss of gold tesserae from its vaulting domes; and the quarrying of its rich marble revetment so that today only half survives, and that dimmed by centuries of grime. Today the luminescence within its reverberant interior is only a fraction of that which its structure was meticulously designed to admit; but despite these depredations, one thousand five hundred years later, an unmistakeable grandeur remains, its vast fabric continues to exude an innate dignity. A century or more of scholarship dedicated to the building has left one fundamental question unanswered: what overarching theme guided the designer's ambitious vision as they planned and supervised the creation of this, the largest and most innovative building ever attempted – one that would remain unequalled for a thousand years?

The question arises due to the existence of seven features of the building's design that are otherwise difficult to account for – and some vital cultural and literary clues that we will deal with in due course. These features cast doubt on the claim that the building, as originally conceived, embodied a specifically Christian theme; and point in an entirely different direction to the source of their inspiration. Our task, then, is to see through

history's discursive accretions and restore the designer's originary intent – mapping and counter-mapping the structure, its origins and the meanings ascribed to it. Let's now briefly reprise these pieces of evidence and use them to guide us to the heart of the building's underlying metaphysics.

The first fact is a simple one – the building's longitudinal axis is orientated to the winter solstice – an alignment that begs the question, was this a functional or symbolic alignment, or both? For the winter solstice had considerable import in the Hellenistic world of that day.

The second point is that from its inauguration in the sixth century (in 537 CE) to the ninth century – a period of some 300 years – one of the most distinctive features of the Hagia Sophia was the absence of all Christian figural imagery. Only after the complete redesign and reconstruction of the central dome in 563 CE (26 years after the inauguration of the building) do we encounter evidence of the addition of a simple cross at its apex.[1] My contention is that the building's structural design and decorative scheme nevertheless constitute a distinctive language; our task, therefore, is to seek to understand its syntax and grammar and to use this to recover the designer's thematic intent, to resurrect the 'message' embedded at the heart of the design – a message that has remained occluded for the last fifteen hundred years.

The third issue to attract our attention is the fact that the building's vast marble floor appears to have been inlaid with book-matched Proconessian marble suggestive of ripples crossing a large body of water. From the earliest days, this feature was remarked upon and employed as a poetic metaphor in ekphrases.[2] What body of water did the designers envisage this feature representing?

Our fourth point, following on from this, is the rather curious – and almost never mentioned – presence (high up, well above head height, on the massive supporting pier facing into the deeply shadowed south gallery) of embedded plaques bearing the emblem of the ancient Hellenic sea god, Poseidon – the only unique, structurally embedded identifying mark in the entire building that appears to date from its earliest days. Was this emblem placed here to provide a 'key' – should one be needed – to how the vast

sealike floor behind should be 'read'? In any case, it is a curious device to find in an age in which the emperor, Justinian, was brutally engaged in suppressing traditional Hellenistic beliefs and practices. Although we will discuss the marble revetment shortly, in the present context it is worth noting that on an adjacent face of the same pier the book-matched marble distinctively forms a large, horned goat-like figure – so prominent is it that it has remained a popular feature for centuries. Was this a deliberate or an accidental feature of the decorative design?

Our fifth point is that the vast expanse of the marble floor is traversed by four broad bands of green Thessalian marble (*verde antico*). Because of the vastness of the floor, from the perspective of someone entering the building, these bands are scarcely visible. They have generally been interpreted as representing rivers;[3] but before jumping to the conclusion that they must represent the four rivers of the biblical Garden of Eden, we should note that the garden of Eden actually had one river that subsequently separated into four named rivers after leaving Eden;[4] and in any case such a reading is hardly consistent with the rest of the floor representing a great sea rather than a garden. From an aesthetic perspective, the transverse bands of green marble are arranged asymmetrically across the floor space, are of differing widths and demonstrate no alignment either with any of their surroundings or the columns bordering the floorspace. If these bands are thought to represent rivers, what rivers do they represent?

Our sixth point is that from a practical engineering perspective – that of imparting the maximum stability to the entire structure – the building's original dome (spanning almost 32 metres) should have been constructed with the steepest possible pitch in order to channel as much of its massive weight as possible down into its four supporting piers. In the event, the designers appear to have opted for the shallowest possible design;[5] one in which the weight of the dome would inevitably exert a much greater lateral force than was functionally necessary; thereby increasing the risk of the supporting pillars being pushed apart and threatening the dome with

collapse. For them to have placed the viability of the structure at the mercy of such a design highlights an order of priorities other than the merely practical; what were these other priorities?

Our seventh point concerns the variegated, book-matched marble revetment that decorates the vast interior. To explain, book-matching is a technique of slicing a block of marble much as you would slice a loaf of bread. Each resulting panel is numbered and then the front of the first slice and the back of the second slice are polished; this process being repeated throughout the marble block. If the polished sides of the panels are then placed adjacent to one another, the patterns made by the veins running throughout the marble block will give the impression that the panels are mirror images of each other. Now, a comparison of the way in which the designers cut and book-matched the marble revetment with that of the near contemporary San Vitale in Ravenna (the Byzantine capital of Northern Italy) reveals a distinct difference in aesthetic orientation; especially in the light of the fact that this highly specialised work possibly employed the same craftsmen. The book-matched marble revetment of San Vitale, utilising four carefully mounted panels, exhibits harmonious 'rosetta-like' patterns. In contradistinction to this, within the second and topmost layers of the Hagia Sophia's revetment, the book-matched – and 'framed' – panels combine two carefully chosen, matching panels that exhibit jagged shapes reminiscent of hybrid figures – 'horned beasts' and 'arachnids.' Clearly a distinct visual scheme underpinned the careful selection and placement of these pictorially framed panels; how do these bizarre images relate to the building's overall theme?

These seven observations raise an important cultural point: although we respond to the various components of design as embodying functional, symbolic or aesthetic values; how would they have been perceived by the designers themselves? To answer this question we must enter their world and see it, in as much as we can, through their metaphysically-infused vision. Who, then, were the designers; and what mindscape did they inhabit?

DESIGNERS, ARCHITECTS AND BUILDERS

> Let him be educated, skilful with the pencil, instructed in geometry, know much history, have followed the philosophers with attention, understand music, have some knowledge of medicine, know the opinions of the jurists, and be acquainted with astronomy and the theory of the heavens.
>
> – Vitruvius, *Ten Books on Architecture* 1.1.3

The various ranks of what we would, today, variously describe as architects, builders and engineers possessed a somewhat different nomenclature and status in the ancient world. A decree of Constantine from 344 CE provides the relevant titles in descending order of status, '*mechanicos et geometras et architectos*.'[6] *Mechanikos* designated a member of a small, elite body of professionals with the highest educational credentials who conducted advanced mathematical and scientific research and specialised in the design and oversight of the largest and most complex building and engineering projects.[7] To qualify as a *mechanikos*, apart from completing all of the formal education (the *quadrivium*) expected of anyone preparing to enter one of the professions, it was necessary to have undergone advanced training in

geometry, mathematics, astronomy and physics as well as practical training in metalwork, carpentry, construction and painting. In addition, practical experience had to have been gained from participating in a number of projects.[8] The *mechanikos* evidently enjoyed high status in intellectual circles; we find the head of the Athenian school of advanced Hellenistic studies, and one of the commanding intellectual and spiritual presences of the age, Proclus Diadochus, dedicating one of his most important treatises, *On Providence*, to a 'Theodore, *mechanikos*,'[9] one of his 'dearest friends,' someone who appears to have known many of the age's leading philosophers and to have studied the subject – possibly under Proclus – in Athens.[10]

Those who had not completed this exhaustive curriculum were reckoned as belonging to a second tier of professionals called either *geometrai* or *architektones*, that's to say, master builders;[11] who would work under the supervision of a *mechanikos* when the complexity of the project warranted it. The *mechanikoi* chosen to undertake the design and supervision of the Hagia Sophia were from Asia Minor, specifically from Ionia – a powerhouse of Hellenistic cultural innovation in every art and science from the earliest times. Significantly, this region had remained deeply committed to its traditional Hellenistic religion and culture, and continued to be so until a concerted effort was made to forcibly Christianise it starting from around 546 CE. This violent desecration and destruction of temples and sacred groves, forced conversions, confiscations – carried out in the face of an, at times, violent resistance – took some thirty years to encompass its objective.[12]

These events were, however, still in the future when Anthemius of Tralles and Isidorus of Miletus were invited to design the replacement for the fifth century church that was burned down during the Nika Riots of 532 CE in a concerted effort to usurp Justinian. Given the speed with which construction commenced and was carried forward – just forty days after the insurrection had been crushed (with the massacre of between 30,000 and 50,000 people, and the exile and confiscation of the wealth and property of many others) – we would be justified in assuming that such a complex undertaking had been long planned, both architecturally and logistically,

before work could actually begin. If so, this would place its designers in the city of Constantinople as early as 530 CE to commence the process of planning and gaining imperial consent for their designs. Both *mechanikoi* were highly respected individuals; we find the historian, Procopius of Caesarea, describing them in the following terms,

> Anthemios of Tralles, the most learned man in the skilled craft which is known as the art of building, not only of all his contemporaries, but also when compared with those who had lived long before him … duly regulating the tasks of the various artisans, and preparing in advance designs of the future construction; associated with him was another master-builder, Isidorus by name, a Milesian by birth, a man who was intelligent and worthy to assist …[13]

As top tier members of their profession, Anthemius and Isidorus were ordinarily engaged in advanced mathematical and scientific research. Anthemius specialised in optics and the mathematics and engineering of reflective surfaces. He is also reputed to have engaged in experiments with sound,

> he contrived to produce the deep, booming sound by the percussion of resonant objects and achieve the effect of loud and terrifying peals of thunder.[14]

Both specialisations, and the practical experimentation that they involved, would prove key to the building's thematic design; and hence to both its structural and decorative realisation. Isidorus, on the other hand, specialised in stereometry, the mathematics of three-dimensional objects; he is credited with writing a commentary (now lost) on a first century CE treatise, *On Vaulting*, by the mathematician and engineer (and indeed, one of the seminal intellects of the first century CE) Heron of Alexandria.[15] Vaults provide the fundamental structural element from which domes are

constructed; vaults, domes and semi-domes being amongst the key architectural elements employed to realise the building's innovative design.

In order to understand how the *mechaníkoi* educational background, collegial connections and close friendships may have influenced their choice of theme – and hence governed the structural design and decorative scheme – we must seek to understand the distinctly Hellenistic metaphysical milieu that formed their intellectual and spiritual alma mater. We know that Anthemius and Isidorus were the students of a philosopher and mathematician, Eutocius of Ascalon, a close friend, student and, subsequently, successor to one of the greatest of Alexandria's Hellenistic philosophers, Ammonius Hermias. Ammonius had, in turn, been the student of the greatest Hellenistic philosopher of the age, Proclus Diadochus, who had studied – alongside Ammonius's father – with Plutarch of Athens and Syrianus at a school of advanced Hellenistic studies in Athens. Proclus would go on to become the scholarch, or head, of this school for almost half a century; he is, therefore, the person to whom we must have recourse in order to understand the depth of the school's practical engagement with traditional Hellenistic spiritual practices. For, as we will see, the school engaged in far more than academic research and teaching; it was, in essence, a continuation of a spiritual tradition that descended directly from one of the greatest mystery cults of antiquity, the rites of Eleusis.

THE RITES OF ELEUSIS

sacred things not to be transgressed, asked about,
or uttered: great awe of the gods stops the voice.
Blest are earth-bound mortals who have seen these rites,
but the uninitiate, who has no share in them,
never has the same lot when dead in misty darkness.

– *Hymn to Demeter* 478–482
(translated by D. Raynor)

Such was the awe in which the Mysteries were held, and such was the strength of the vows of secrecy sworn by each initiate, that over the course of the some two thousand years of their operation, the nature of the secret rites, the most august mysteries of the ancient world, remain as obscure today as they were to the uninitiated in antiquity. It was Aristotle who commented that the initiates do not learn something (*mathein*), but rather 'suffer,' or undergo an experience (*pathein*),[16] concerning which it was not only forbidden (*aphorrheton*) to speak – disclosure constituting a capital offence – but one that was, quite literally, 'unspeakable' (*arrheton*). This quality, the essential incommunicability of the ritual crux, is consistent with

other highly personalised, embodied – or 'imagistic'[17] – modes of spiritual experience. In another rare and suggestive contribution to the elucidation of this otherwise 'unspeakable' experience, Plutarch of Chaeronea, a priest of Apollo at Delphi during the first century CE as well as an Eleusinian initiate, reverted to the phenomenology of mystery initiation in order to elucidate an equally obtuse experience – that of dying; an experience, he suggests, comparable to that of undergoing initiation,

> Then [at the point of death] it [i.e. the soul] suffers something like what those who participate in the great initiations suffer. Hence even the word 'dying' (*teleutan*) is like the word 'to be initiated' (*teleisthai*), and the act (of dying) is like the act (of being initiated). First of all there are wanderings and wearisome rushing about and certain unending and fearful journeys through the darkness, and then before the very end all the terrors – fright and trembling, sweating and amazement. But then one encounters an extraordinary light, pure regions and welcoming meadows, with voices and dancing, majestic sacred sounds and holy sights; in which now the completely initiated one – becoming free and set loose – enjoys the rite, crowned, and consorts with holy and pure men.[18]

The mysteries (*mysteria*) involved two rites or ceremonies (*telete*) that were undertaken separately and administered by the hereditary, initiatory families of Eleusis, the Eumolpidae or the Kerykes.[19] The first rite, the lesser *mysteria*, was known as *myesis*, and served as a prerequisite for taking the greater *mysteria*. It was intended to cleanse the initiate from *miasma*, or ritual impurity, even if incurred far back in the ancestral line; a necessary step when seeking to approach deities and the entourage of beings who accompany them. Undergoing *myesis* qualified the initiate, now known as *mystes*, for the greater mysteria,[20] the initiatory ritual itself. Although many people underwent the preliminary rite of *myesis* far fewer went on to undergo the greater *mysteria*, a nocturnal experience which had the reputation of thrusting the initiates into the numinous realm and an

encounter with otherworldly beings and powerful deities. The deities most commonly associated with the mystery rites of antiquity – Dionysos, Persephone, Hecate – were all chthonic deities, intimately associated with the underworld and the realm of the dead; so that 'contact' with them during mystery rites was known to induce panic and blind terror in the unprepared. Proclus, a great devotee and practitioner of mystery rites, described the effects of the rites as 'unintelligible' but powerfully affecting, so that,

> The mysteries … cause sympathy of the soul with the ritual (*dromena*) in a way that is unintelligible and divine, so that some of the initiates, filled with divine awe, are stricken with panic; others assimilate themselves to the holy symbols, leave their own identity, become at home with the gods, and experience divine possession (*entheiadzein*).[21]

Proclus accounts for the powerful affects that he describes as arising from the incursion of the chthonic beings within the entourage of the approaching deities,

> in the holiest of mysteries, before the gods arrive, the emanations of chthonic demons become manifest and visions frighten the initiates, distracting them from the good things that the gods have to offer.[22]

The ritual process was typically modelled on some portion of the deities' most defining myth cycle; but the unvarying mechanism for ensuring ritual efficacy was always a combination of the presence of a hereditary initiatory lineage-holder and dance, irrespective of whether it was performed in a stately or an ecstatic mode. In his encomium, *De saltatione*, Lucian of Samosata states,

> Among the ancient mysteries not one is to be found that does not include dancing … persons who engage in the mysteries are popularly

> spoken of as 'dancing them out.'[23]

We find this referenced in connection with Aristophanes' play, *Women at the Thesmophoria*, wherein the action is based on the traditional dance performed during the Eleusinian mysteries, whose presiding deities were Demeter and Persephone,

> Come now, let us dance, as is the custom here for us women when, in the holy seasons, we hold the revered mystery rites for the two goddesses … Rise up, begin the dance, form the circle with light movements of your feet, join hands with each other, let everyone take up the rhythm of the dance! Move your feet quickly! Let every eye watch over the circling array of our dance! And let every one of you honor the Olympian gods with song and with frenzied choral dance![24]

The metaphysics of sacred dance constitutes one of the lost keys of ritual efficacy in recognition of which Artemidorus Daldianus in his book of dream interpretation, the *Oneirocritica*, adduced how, 'a "chorus of stars" (*choros astron*) as a dream image is particularly auspicious to "those who practice more mystery-like devotions."'[25] Within the landscape leading to the mystery sanctuary, as well as within it, dancers sought to energise the ritual process through visualising their steps mirroring the movements of certain celestial bodies; just as their feet, upon the sacred soil of the sanctuary, connected them with the chthonic realm of the Mistress of the Underworld, 'dread' Persephone; also referred to by the euphemism, Kore – the girl – the use of her true name, as Plato noted, remained for many a source of fear.[26] The metaphysical doctrine symbolised by the myth and enacted during the mystery rite (that of Kore's abduction, descent into and redemption from the underworld to be reunited with her mother, Demeter, and the subsequent birth of a divine child) is, at least in part, that of the soul's descent into, and redemption from, the cycle of successive rebirths. During the rites, the ritual evocation of the deities was sung by the

hierophant (a Greek word formed from the conjunction of *hieros*/sacred and *phainein*/bring to light, make known, reveal) an official whose family surname, Eumolpus, means 'fine singer.' Beyond the promise made to initiates in the epigraph to this chapter, that of enjoying a blessed state in the afterlife, what little information we have clearly attests to the positively impactful nature of these rites which were experienced as both life-enhancing and socially cohesive,

> By their means we have been brought out of our barbarous and savage mode of life and educated and refined to a state of civilization; and as the rites are called 'initiations,' so in very truth we have learned from them the beginnings of life, and have gained the power not only to live happily, but also to die with a better hope.[27]

With these words, Cicero, a first century BCE Roman orator and Eleusinian initiate, provided his endorsement of the personal and cultural importance of the rites; a view endorsed by other members of the Greco-Roman elite, including several emperors, who, over the course of two centuries, were frequent attendees at the rites. Such was their importance throughout the Hellenistic world for millennia that one can only wonder at the depth of feeling provoked by the destruction of the sanctuary of Eleusis by 'the impiety of the men clad in black raiment';[28] in other words, by the Arian Christian monks who accompanied the Visigoths in their invasion of Greece in 395 CE.

THE SURVIVAL OF THE MYSTERIES AND THEIR HEREDITARY LINEAGE

> knowledge coming out of the priesthood that has been in the family for many generations.
>
> – Dadoukhos of the Eleusinian Mysteries[29]

Inaugurated by the goddess Demeter herself, the Mysteries of Eleusis were only efficacious when enacted through the mediation of individuals specifically empowered to convey their characteristic blessing – an introduction to and ecstatic communion with the presiding deities. According to the Homeric *Hymn to Demeter* – a text committed to writing around the seventh century BCE but embodying traditions of much greater antiquity[30] – the goddess Demeter personally empowered Eumolpus, the 'fair singer,' to conduct the rites of Eleusis,

> Demeter revealed her sacred rites to … powerful Eumolpos, and leader Keleos, teaching her Mysteries to them … sacred things not to be transgressed, asked about, or uttered: great awe of the gods stops the voice.[31]

The rites of Eleusis were conducted by a body of priests and priestesses whose offices were held by hereditary right within certain priestly families;[32] amongst these the Eumolpidae, the principal priestly family of Eleusis, provided the hierophant who was responsible for conducting the rites;[33,34] and without whose direct personal involvement the rites would have lacked spiritual efficacy and validity (other priestly families also held hereditary positions, such as those of the Eleusinian priestesses). Epigraphic evidence demonstrates that over the course of centuries members of the Eumolpidae also held some of Athens' most powerful political offices,[35] and presided over the religious court of Eleusis as well as priesthoods in other cults. These positions accrued considerable wealth, the Eleusinian hierophant being in receipt of the largest share (two obols) of the fees payable by each initiate as well as enjoying special civic honours.[36] Indeed, members of the family appear to have generally possessed significant wealth and enjoyed high social standing;[37] as indeed did the many members of the Hellenic and Roman elite (such as the Proconsul for Achaea, Vettius Agorius Praetextatus) who undertook initiation into the rites of Eleusis and held the rites in a benevolent and protective regard; a factor that goes a long way to explaining the extraordinary persistence of Hellenistic rites and practices in Athens long after their suppression elsewhere. The last hierophant of Eleusis was named Nestorius; and around the time that the sanctuary was destroyed, his son, Plutarch of Athens, a priest of Asclepius,[38] inaugurated a more discrete, but nevertheless distinctly Hellenistic, spiritual formation; a school of advanced Hellenistic studies in Athens with its scholarly programme complemented by a performative, initiatory and theurgically oriented praxis. As we will see, these two events appear to have been intimately connected.

PLUTARCH'S SCHOOL OF ADVANCED HELLENISTIC STUDIES

> Philosophy is united with the art of sacred things since this art is concerned with the purification of the luminous body (*augoeides*), and if you separate philosophical thinking from this art, you will find that it no longer has the same power.
>
> – Hierocles of Alexandria[39]

With these words Hierocles of Alexandria, one of Plutarch's pupils, described the school's outlook and orientation. Although often referred to as a 'Platonic Academy,' as though it aspired to be another of the many schools of philosophy throughout the Eastern Roman Empire, its source of inspiration, indeed its entire approach, lay wholly elsewhere,

> Some put philosophy first, as Porphyry, Plotinus … while others placed more stress on the hieratic art, as Iamblichus, Syrianus, Proclus and the hieratic school in general.[40]

With his reference to 'the hieratic school in general' Damascius sought to underline the unity of aspiration and approach that underlay the schools descending from Plutarch of Athens and Iamblichus respectively. The nature of the performativity alluded to – the 'hieratic art' – in the case of the school of Athens depended, in turn, wholly upon Plutarch's daughter, Asclepigenia. One of the school's later scholarchs, Marinus of Neapolis, informs us that she,

> had been exclusively taught how to perform the mystic rites (*telete*) preserved by Nestorius as well as the entire science of theurgy.[41]

Asclepigenia, the grand-daughter of Eleusis' last hierophant, was trained to enact the sacred mystery rites of Eleusis on her own authority; in effect, casting her in the role of a high priestess and as the hereditary lineage holder of those rites. Furthermore, she is reported as both initiating and teaching ritual performance to Proclus, perhaps the most influential metaphysician and theurgist of the age, who served as the scholarch of the school for some forty-five years. We will return and discuss the school's ritual orientation and Asclepigenia's contribution to it in more depth shortly. For now, it is noteworthy that these esoterically significant facts are seldom accorded the attention that they deserve.

The rites of Eleusis were the most august of the Hellenistic world; but their ancient performance unfolded within a sacred landscape that commenced at the city Eleusinion in Athens, and continued for almost twenty kilometres on a mythically-imbued and ritually structured processional route that led to the sanctuary of Eleusis. The ritual conducted within the sanctuary also took place against the backdrop of the sanctuary's sacred landscape, combining natural features, such as caves, with the sanctuary's various buildings and temples and utilising a hierarchy of priests and priestesses. The challenges of transposing the essential elements of this elaborate, large-scale staging to the greatly reduced space of an Athenian villa must have been considerable. In the case of the Villa of the

Mysteries in Pompeii, wherein the telestic rites of Dionysos were performed, elements of the deity's mythical landscape, myth cycle and key ritual processes were transposed to the frescoed walls of the room in which the rites were conducted and so affected the transition from an outdoor, rural environment to an indoor urban dwelling.[42] Unfortunately we have no surviving traces to indicate that a similar strategy was pursued at either the House Chi, the best candidate for the school's original premises, or its subsequent centre in Athens;[43] but this certainly constituted a viable option for securing the vital core of the mystery rites and 'bridging' the evident gap between Athens' sprawling sacred landscape and a private urban space.

Phenomenologically, 'higher rites' of initiation are typically experienced as a distinct presence – a change in atmosphere accompanied by a strong inner heat (*energeia*) and a shift in awareness that leads to the perception of transpersonal visionary material. Strictly speaking, such rites require no more than a ritually purified space, a suitably prepared candidate and an initiator who is empowered to evoke the deity from whom initiation is sought. Reduced to these bare essentials telestic rites can be approximated to theurgic rites as constituting a shared techné of divine possession. In an aside we note that some of Iamblichus' students were in Athens at the late fourth century and may well have met Plutarch in this critical juncture; the practice of theurgy was, of course, closely connected with the school of Iamblichus for whom the essence of spiritual work was to 'establish the soul in the demiurgic god in his entirety.'[44]

The fact that Plutarch's school could offer authoritative spiritual teaching, initiation and theurgical training from an authentic lineage holder conferred considerable status upon it. We can therefore conclude that Plutarch's school was specifically designed to serve, and preserve, the hereditary lineage that underpinned the performance of the mysteries of Eleusis; in order to ensure that the lineage continued to serve its underlying spiritual purpose – the evolutionary and civilising outcome arising from a direct encounter between humanity and the divine; wherein 'the divine' means direct contact with, and possession by, a higher order being or deity. It is this fact, more than any other, that underlines the significance of the

performative portion of the school's programme. As an aside, we note that Plutarch – as the son of the last Eleusinian hierophant as well as being a Priest of Asclepius – was also intimately involved in the celebration of the mystery rites of Eleusis. The Epidauria, a festival in honour of Asclepius, took place after the Eleusinian purificatory rites and prior to the main procession from the City Eleusinion to Eleusis to enact the mysteries. Although the nature of the relationship between these two traditions, and their deities, remains elusive, the fact of its existence serves to underline just how interrelated the spiritual culture was, as well as the prominence that members of the Eumolpidae enjoyed across a range of Athens' most important religious festivals and within the Greco-Roman world in general. As a consequence of these prestigious antecedents and, more importantly, the demonstrable efficacy of its practices, the school drew, generation upon generation, some of the most spiritually devote, educated and able intellects of the Hellenistic world, generating fundamental texts of mathematical, metaphysical and theurgical exegesis for the hundred and fifty years or so of its documented existence. The school was, in essence, a spiritual community dedicated to serving – just as the sanctuary of Eleusis had once served – as an institutional vehicle for the realisation of henosis (union with the divine). We will next consider how it sought to achieve this and how its structure, curriculum and practices were designed to affect an indelible shift in spiritual awareness.

ASCLEPIGENIA · THE LAST ELEUSINIAN PRIESTESS

In terms of her empowerments, knowledge and responsibilities, Asclepigenia was, in every sense, a Hellenistic priestess, a *hierophantissa*, and the sole legitimate lineage holder of the Eleusinian tradition whose avocation served to anchor the school's reputation in the wider Hellenistic world and secure its evolving system of metaphysics in the bedrock of direct illumined experience. In order for her to have learned 'how to "perform" the mystic rites (*telete*) preserved by Nestorius as well as the entire science of theurgy,'[45] Asclepigenia must have been at least in her late teens in 432 CE when her father died; from this, we can surmise that she was probably born around 410/412 CE – in other words she was of a similar age to Proclus. As a priestess she lived chastely and continued to discharge her responsibilities until her death in 485 CE (in the same year as Proclus); so that her tenure as 'high priestess' precedes by a decade and then parallels his forty-five years of dedicated service. Whereas academia valorises the scholarly production of texts, the emphasis in the school's program – and the reason for its vitality as a driving force of Hellenistic cultural renewal – was always the emphasis that it placed on the primacy of the performative; and this depended, at its core, upon Asclepigenia's ability, as initiatrix and theurgical expert, to establish the ground of the school's evolving system of

metaphysics in direct, lived experience. Proclus' lauded accomplishment of having ascended the so-called 'ladder of virtues' (the fundamental stages of spiritual attainment) to the summit of the 'hieratic' or 'theurgical' virtues is based upon the school's self-professed reliance upon initiatory and theurgical means, predicated upon Asclepigenia's ability to ritually invoke these states, and by doing so, effect an 'introduction' to the relevant level of the divine hierarchy.

There is no record concerning to whom she might have vouchsafed her initiatory lineage before death, though it would surely have been incumbent upon her to do so. In this regard, the eleventh century philosopher and Hellenist, Michael Psellus, is reported as saying that the Mysteries of Ceres continued to be performed in Athens as late as the eighth century[46] – three hundred years later, though his authority for this claim is unknown. On the face of it it seems eminently possible given the tendency for the tradition's performative rites to evolve towards ever smaller spaces and their more discrete performance; after all, Olympiodorus the Younger was still openly teaching a fairly undiluted Hellenism in his public lectures on Plato as late as the mid-sixth century CE in Alexandria, and that under the ever-watchful eyes of the city's Christian zealots.[47] If true, Psellus' claim implies that a mechanism for both preserving the lineage and continuing to bestow initiation had been found; and this despite the fact that from the late-fifth century onwards both the school itself, and the wider Hellenistic world, came under increasing pressure to conform to an imperially sanctioned flavour of Christianity. In esoteric thought, a physical interruption to a lineage does not represent an insuperable problem; since a lineage is conceptualised as the direct relationship – a 'golden chain' – obtaining between certain other-dimensional higher order beings and a 'group soul' incarnating through successive members of an extended spiritual family that constitutes a 'divine race';[48] esoterically, such a connection is thought to be capable of laying dormant for several generations before subsequently reasserting itself.

We can gauge the extent of the school's debt to the rites of Eleusis from a passage in Proclus' *Platonic Theology* wherein he embarks upon an exegesis of the metaphysical significance of two of the mythical figures who featured as central actors in Eleusis' mystery drama: Demeter and her daughter, Persephone, also known as Kore. Whenever Plato wished to recount authentic teaching he prefaced his remarks with expressions such as, 'as the Orphic poets say' or 'as those knowledgeable about the mysteries say'; we find Proclus using the same circumlocution to signal that he is repeating priestly lore in connection with Eleusis' dramatic narrative. Since the sanctuary of Eleusis had ceased to function nearly a century before, his ability to relate authoritative sacred teaching about the mystery drama implies that his exegesis likely originated with Asclepigenia, the one person whose initiation and training had made her a legitimate interpreter of the Eleusinian mysteries.

> For the rumour of theologists who delivered to us the most holy mysteries in Eleusis, says, that above indeed, Proserpine abides in the dwellings of her mother, which her mother had fabricated in inaccessible places, exempt from the universe, but that beneath she governs terrestrial concerns in conjunction with Pluto, rules over the recesses of the earth, extends life to the extremities of the universe, and imparts soul to things which are of themselves inanimate, and dead.[49]

Founded upon the continuance of Eleusis' initiatic tradition and the Eumolpidae's hereditary authority to conduct telestic rites, the school assumed a commanding position within the cultural and spiritual life of the Hellenistic world. Asclepigenia, in turn, bestowed initiation, as well as training in the performance of theurgical rites, upon her students. Marinus of Neapolis (Proclus' successor as the school's scholarch) informs us that Asclepigenia trained Proclus – one of the most significant philosophical figures of the era – to perform such rites:

> He practiced the Chaldean prayer-meetings and conferences, and even employed the art of moving the divine tops. He was a believer in these practices, in unpremeditated responses, and other such divinations, which he had learned from Asclepigenia … Even before that, according to the prescribed order, and purified by the Chaldean lustrations, the philosopher had, as *epoptic* initiate, witnessed the apparitions of Hecate under a luminous form …[50]

The nomenclature of this passage is, to say the least, somewhat obscure. The 'art of moving the divine tops' (strophalomancy), for example, is a curious expression. It appears to derive from the Chaldean Oracles wherein the top is called 'Hecate's Top.' As a magical implement the 'top' or spinning top was one of the 'Toys of Dionysos' – a class of magical objects said to have been the playthings of Dionysos Zagreus prior to his murder at the hands of the Titans. Such sacred ritual objects were associated with a class of intermediary entities or spirits – *iunges* – who acted as messengers between worlds and were therefore able to facilitate divination and invocation. By ritually spinning the top either to the right or left the in-dwelling *iunx* could be induced to act as a go-between in the invocation or dismissal of a deity.[51] It is presumably in this latter, invocatory, use that Proclus, 'as an epoptic initiate' (in other words, as someone who has repeated the *mysteria* or mystery rite), is said to have invoked a luminous, epiphanic vision of 'the apparitions of Hecate,' the influx of chthonic entities that precede an epiphany of the deity herself. The appearance of the 'apparitions of Hecate' in this theurgical context is by no means fortuitous; she was one of the main deities amongst the entourage of Eleusinian gods and goddesses, as attested from the very earliest days in the eighth century BCE Homeric *Hymn to Demeter*;[52] and a deity to whom Asclepigenia's initiatory and hierophantic authority would have granted access.

Where formerly the mystery rites of Eleusis were enacted with large-scale religious and civic ceremonial, connecting Athens' Eleusinion with the sanctuary of Eleusis, the destruction of the sanctuary rendered such

rituals impossible, and so necessitated the transfer of the core of their initiatory practices to a new institutional setting in central Athens. Archaeological research has identified a large building (often referred to as the 'House of Proclus' or the 'House Chi') erected in the relevant time period and positioned where Plutarch's school was said to be.[53] In terms of both its size and layout (it consists of a large main hall with numerous niches containing statues of Kybele and Asclepius; a large exedra; and a number of smaller rooms of various sizes leading off from the main hall). In all these respects its layout is adjudged to be more characteristic of a teaching establishment than a domestic building. Intriguingly, the remains of a sacrificed piglet have been found beneath the structure providing evidence not only for the performance of Hellenistic ritual but, more specifically, for a ritual bearing a direct relation to the rites of Eleusis wherein the sacrifice of a piglet was required as a dedication to the goddess Demeter prior to initiation into the mysteries; though in this case the sacrifice may well have been intended as a foundation rite. Nor are we lacking precedents for the practice of mystery rites in domestic settings beyond the purview of the established sanctuaries and temples.[54] The tradition of Dionysian mystery rites was long associated with itinerant initiators utilising domestic spaces for their rituals.[55] A room in the privately owned 'Villa of the Mysteries' in Pompeii preserves the distinct traces of Dionysian mystery iconography, including life-size depictions of figures engaged in ritual operations.[56]

METAPHYSICS, THE INEFFABLE AND NON-DISCURSIVITY

> The doctrine professed by Ammonius [Saccas], Plotinus, and Origen [the Platonist] as well as Porphyry and Iamblichus. They and their successors are all part of a holy race. This is true into the time of Plutarch [of Athens], the one who was (my) master and taught (me) these doctrines. All of these men were in agreement with the philosophy of Plato and celebrated the doctrines in a pure state.
>
> – Hierocles, *On Providence*[57]

Although the key members of the school of Athens hailed from all over the Hellenistic world, by far the largest group were from Alexandria, many of whom were related to Syrianus who, alongside Hierocles (also from Alexandria), was amongst the first to study with Plutarch of Athens. As the epigraph at the head of this section indicates, from the earliest days the members of the school of Athens conceived of themselves as members of a 'holy race.' As we will demonstrate as we proceed, their outlook was shaped by the notion that as spiritually oriented souls they had taken incarnation to promulgate an ongoing, unfolding spiritual tradition whose earthly

manifestation could be traced from Ammonius Saccas of Alexandria (in the late-second to mid-third century CE) to Plutarch of Athens a century later. Indeed Proclus was even said to have been sent by the gods to Athens in order to preserve the teaching of the tradition,

> For he was being sent there by the gods of philosophy to preserve the school of Plato in its truth and pureness.[58]

For its own part the organisation of the school of Athens was such as to preserve this sense of an elite transmission of spiritual knowledge. The school utilised a cluster of buildings owned by Plutarch's family in which both the students and teachers could live and conduct their studies, as well as the Hellenistic dedicatory, divinatory, initiatory and theurgical practices described by Marinus.[59] Both organisationally and in terms of its orientation towards Hellenistic spiritual practices, the school of Athens was constituted along the lines of a spiritual community, run on a communal basis, rather than another of Athens' many commercial educational establishments.

By examining the geographical origins of some of the more prominent members of the school we can gauge just how widespread and prominent its reputation was. As we noted, by far the largest group, the 'Alexandrians,' was comprised of Syrianus, his relative Aedesia, her husband Hermias and their son Ammonius, Hierocles, Isidore (who bore the title diadochus – 'successor' – in recognition of his abilities) and Olympiodorus the Younger, the last great teacher of Hellenistic metaphysics in Alexandria. Another Alexandrian, Asclepiodotus, one of Proclus' students and subsequently tutor to Damascius, went on to become the head of the prestigious Hellenistic school of Aphrodisias.[60] Along with Athens and Alexandria, Aphrodisias was one of the three main centres of Hellenistic philosophy associated with the school of Athens. Situated high in a river valley on the opposite side of the Meander River from Tralles where Anthemius, one of the Hagia Sophia's *mechanikoi*, lived. The school of Pergamon, to the north,

was associated with Aedesius and the disciples of Iamblichus and formed another great centre of Hellenistic teaching in the region. Although Proclus was born in Constantinople, his family were from Xanthus in Lycia, on the south coast of Anatolia; Marinus from Nablus in Palestine; Damascius, as the name suggests, from Damascus; and Simplicius from Cilicia, also on the Mediterranean coast of Anatolia. The ability of these students to travel far from home, reside and undergo extensive periods of study in the great centres of learning suggests that most of them could support themselves through teaching. Others, such as Proclus, possessed inherited wealth; though money apparently meant little to him – he lived frugally and used his wealth to maintain the independence of the school of Athens.[61] In fact we have a number of accounts of these philosopher-theurgists using up their own financial resources to support their schools or else dispensing their wealth in acts of charity.[62]

Given their backgrounds, we can be fairly sure that their education would have already encompassed grammar, logic and rhetoric as well as the classical quadrivium (arithmetic, geometry, music and astronomy). In addition most are said to have already completed advanced studies in a variety of disciplines – rhetoric, jurisprudence, mathematics, Aristotelian philosophy and logic – before attending Plutarch's school of Athens; in other words, they would have been amongst the most advanced students of philosophy and mathematics within the Hellenic world. Within Plutarch's system, the study of Plato's dialogues constituted an advanced specialisation for those who had already mastered Aristotle's extensive oeuvre. Indeed, Marinus described the relationship between Aristotle and Plato using the terminology of the two stages of initiation typical of a mystery cult; wherein Aristotle provided the *myesis*, or preliminary purification, after which the *mystes* could progress to the *epopteia* or full initiation. Marinus utilises this metaphor when he states that after Proclus had completed his studies of Aristotle with Syrianus,

> Solidly outfitted with these studies, which so to speak, are a kind of preparatory initiation or lesser mysteries, Syrianus led Proclus to the

> greater mysteries of Plato.[63]

Comparing the study of Plato with the performance of the Mysteries surely strikes the modern reader as bizarre; in fact it evidences the wide gap between how we 'read' Plato today and how he was understood within the Hellenistic spiritual traditions of antiquity. Contained within his thirty or so dialogues, each one a dramatic script featuring a cast of historical characters (none of which includes Plato himself) not only do we encounter discussions of the perennial issues of philosophy (knowledge, naming, necessity, ethics and political philosophy); we also encounter discourses, best described as 'Pythagorean' or 'Orphic,' involving the creative unfolding of reality, its ensoulment, fate/destiny, the gods and daimones, metempsychosis, ethics and the importance of initiatory, theurgical and mystery rites. Modern scholarship has tended to ignore this more 'esoteric' material in favour of the analytic treatment of the philosophical issues, with the result that,

> We constantly run the risk of slipping into a scholarly Platonism that would double the world of objects by taking for a definitive system the mythic presentation of the theory of Ideas.[64]

Within the scope of this 'mythic presentation' of ideas we need to note that the school's scholarly studies were never restricted to Plato but ranged over the Hellenistic metaphysical, literary and mathematical traditions including Plotinus, Porphyry and Iamblichus alongside Pythagoras and Euclid; all of whom – as we noted – were deemed parts of a common underlying spiritual tradition, and described by Proclus as constituting a 'divine choir'[65] or, more colloquially, 'singing from the same hymn sheet.' Special importance was also accorded to such ancient Hellenistic performative and liturgical texts as the Chaldean Oracles, Orphic Rhapsodies and Homeric Hymns; as well as such ancient literary texts as Homer's *Iliad*, Hesiod's *Theogony*, *Works and Days* and the poetry of Pindar

and Empedocles. Most of the school's leading figures wrote extensive exegeses of some of these key texts interpreted through the lens of direct illumined experience, though it forms none of our purpose to rehearse this vast body of material here. The salient point for the school of Athens was that all of these texts were deemed to have been divinely inspired and, as such, articulate insights into ineffable, suprasensory, suprarational realities that are otherwise only accessible through the altered states of awareness that accompany intense spiritual activity. Although inherently non-discursive, such insights nevertheless require discourse resulting in,

> texts that are at odds with their own textuality, discourses that deny that anything has been asserted, and discursive strategies that set themselves against their very discursivity.[66]

By extension, the corpus of traditional myths and legends involving the frequent occurrence of violent (Kronos' castration of Ouranos), monstrous (the minotaur and Medusa), shameless (Zeus impregnating his own daughter, Persephone) and murderous episodes (the Titans murdering, cooking and eating Dionysos) were interpreted as oblique expressions of the, 'non-discursiveness of the intelligible world,'[67] the irreducible otherworldliness laying beyond the realm of human rationality that is yet expressive of the changes, transformations, metamorphoses integral to the spiritual path – as illustrated by the following passage from Damascius,

> Like Kore, the soul descends into genesis, like Dionysus she is scattered by generation, like Prometheus she is chained to the body. She frees herself by acquiring the strength of Hercules, gathers herself together through the strength of Apollo and of Athena the Saviour i.e. by truly purifying philosophy, and she elevates herself to the causes of her being with Demeter.[68]

It is, therefore, misleading to describe the school of Athens as a 'Platonic Academy'; and the nineteenth century designation 'Neoplatonism' is equally unhelpful on anything more than a superficial level. For not only was the school's curriculum not limited to Plato; nor was its instruction limited to textual scholarship. At every stage the school's program was rooted in performative, rather than merely scholarly, spiritual disciplines. It would, therefore, be useful at this stage to briefly clarify the relationship between the school's spiritual aspirations and its teaching program. We can do so through a device known as the hierarchy or ladder of virtues.

THE LADDER OF VIRTUES

> the greatest contribution, to my mind at least, is made by the telestic life, when it removes through divine fire all the 'defilements' caused by generation.
>
> – Proclus, *Commentary on the Timaeus*[69]

Accounts of the lives of two of the most significant teachers of the school of Athens have been preserved in the biographies of Proclus by Marinus and Isidore by Damascius.[70] These exemplary narratives have been structured to show how their subjects' lives embodied the various phases that comprise the 'ladder of virtues' – the fundamental stages of spiritual attainment expressed in the form of an ascending scale of virtues which, through ethical engagement, evolve to encompass those performative spiritual disciplines that prepare the *psyche*/ soul for divine *henosis*, possession by and union with, a deity.

Marinus' eulogistic narrative of Proclus' life needs to be read, at one and the same time, as both biographical and as exemplifying this idealised model of spiritual ascent. The central role that the 'ladder' plays in

structuring these narratives points to its importance as a guiding framework for the spiritual disciplines of the school of Athens. The metaphysical basis for the 'ladder' evolved from Plato's *Republic* where it is founded upon developing a healthy balance between the three parts of the *psyche*/soul: *eros*/appetitive, *logos*/rational and *thymos*/spirit; the harmonisation of which gives rise to the acquisition of the four cardinal virtues – Prudence, Justice, Fortitude and Temperance. Iamblichus is generally credited with extending the range of virtues to create a ladder of seven virtues (natural, ethical, civic, purificatory, contemplative, paradigmatic and theurgic or hieratic) and with allying them with Platonic dialogues that articulate key themes encountered at each level (one such sequence being: *Alcibiades*, *Gorgias*, *Phaedo*, *Cratylus*, *Theaetetus*, *Sophist*, *Statesman*, *Phaedrus*, *Symposium*, and *Philebus*, followed by two 'complete' texts, *Timaeus* and *Parmenides*).[71] Studied in sequence the texts were used as an aid in the refinement of one's sensibility through the exploration of issues related to the corresponding virtue.

The first rung of the ladder, the 'natural virtues,' concerns self-knowledge and the challenge to overcome our primary attachment to the narrative construction of the persona – a central theme of Plato's *Alcibiades*, the first book on the recommended reading list of Plato's dialogues – in favour of the realisation of an intangible transpersonal, multi-incarnational *psyche*/soul.[72] The second rung, the 'ethical virtues,' covers a large domain of discourse, one thread of which will be found to have particular relevance when we come to consider the building's decorative design. It has to do with the theme of the postmortem judgment and fate of souls in the afterlife. This theme is explored in Plato's *Gorgias* (523ab–525e) – the text recommended for study after *Alcibiades* in our list. The passages cited above contrast the lot of the just and honourable in the afterlife with that of despots and tyrants, who are consigned to the lowest levels of Tartarus for eternity. Their behaviour is therefore specifically highlighted as ethically beyond the pale; and the geography of the afterlife therefore provides a suitable iconography for representing the idea of their 'just deserts'; and an expression of spiritual dissent regarding their rule. We will return to consider these passages in detail when we come to consider the building's

decorative design. With the third rung of the ladder, the political – or, better to say, civic – virtues, we arrive at a domain of engagement requiring discernment. The scholarch, Damascius, described the benefits of exercising this virtue as,

> The virtue which engages in the midst of public life through political activity and discourse fortifies the soul and strengthens through exercise what is healthy and perfect, while the impure and false element that lurks in human lives is fully exposed and more easily set on the road to improvement. And indeed politics offers great possibilities for doing what is good and useful, also for courage and firmness.[73]

From the virtues to be gained from engaging in civic action we move to the fourth rung of the ladder, the 'purificatory virtues.' Again, highlighting just one thread in this multi-aspected issue, Proclus underlines the importance of undergoing ritual purification,

> the greatest contribution, to my mind at least, is made by the telestic life, when it removes through divine fire all the 'defilements' caused by generation, as the [Chaldean] oracles teach, and all that is alien and irrational that the pneumatic vehicle of the soul has attracted.[74]

We have seen that spiritual purification (*katharmos*) from ritual impurity (*miasma*) was bestowed by the rite or ceremony of *myesis*. The prerequisite for any religious rite included a regime of dedicatory and purificatory acts and rituals (including such routines as washing, changing clothes, avoiding certain foods and the fumigation of the ritual space and dedication of the ritual objects). Some such regime must also have been a prerequisite for undergoing *myesis*, a ritual formerly performed by the hierophant of Eleusis and in the school of Athens by the hierophantissa, Asclepigenia. Such rites involve an aspiration towards manifesting more ethical levels of behaviour and atoning for past misdeeds – whether in this life or some past life, or

indeed within one's ancestral line. We find Plato specifically alluding to the utility of such rites for healing ancestral miasma,

> when diseases and the worst kinds of trouble plague certain families through some ancient ancestral guilt … by taking refuge in prayers and the service of the gods, and by purifications and sacred rites (*telete*), whoever is afflicted in this way is released from torment.[75]

Myesis could be enacted independently of the mysteries and undergone any number of times; indeed the evidence seems to suggest that the majority of people treated the rite in this way rather than as a gateway to the mysteries.[76] Moving on to the fifth rung of the ladder, the 'contemplative virtues,' the following paragraph, again from Proclus, can be taken as illustrative of how this virtue may have been cultivated,

> If we are to approach the One by means of these negative conceptions and to emancipate ourselves from our accustomed ways of thought, we must strip off the variety of life and remove our multifarious concerns, and render the soul alone by itself, and thus expose it to the divine and to the reception of divinely inspired power, in order that having first lived in such a way as to deny the multiplicity within ourselves, we may thus ascend to the undifferentiated intuition of the One.[77]

Proclus' reference to 'negative conceptions' refers to a mystical practice involving the withdrawal of awareness from both external and internal distractions. This approach, best described as apophatic (Lt. *vía negativa*), involved cultivating a capacity for radical disengagement. The discipline involved with such practices not only facilitates the ability to enter the state of receptiveness essential to theurgical rites, but aids the theurgist in not reentering a state of alertness in response to the influx of divine energy.

The sixth rung of the ladder, the 'paradigmatic virtues,' provides essential preparation for the theurgical practices of the seventh rung of the

ladder. In essence it is the discipline of assuming the disposition and qualities of the deity towards whom one aspires and of behaviourally manifesting those qualities. The esoteric utility of this practice being that it prepares the subtle vehicle (*augoeides*) for the assumption of the godform that will subsequently facilitate the achievement of theurgical *henosis* or union.

Finally, the seventh rung of the ladder, the 'hieratic' or 'theurgic' virtues, utilise the ritual know-how (*techne*) and initiatory lineage of the Eleusinian hierophants held in the family of the Eumolpidae and transmitted to Asclepigenia. These rites equipped the school, through her agency, to perform the greater *mysteria* that connected the *mystes* directly to a deity. We cannot know how often these rites were performed but as we noted earlier, Marinus describes Proclus as 'an epoptic initiate';[78] the significance of this qualifier being that it is used to refer to someone who has repeated the *mysteria*. Based upon the cross-cultural ethnography of higher-order ritual practices, such an initiation would have constituted an empowerment that subsequently facilitated theurgical invocation, the techne for which would have also been bestowed by Asclepigenia. The prevailing view within the hieratic school generally was that the gods themselves sought such union but that it was the responsibility of the theurgist to make themselves a suitable 'receptacle' for it to take place – which is, in essence, the rationale for practicing the virtues of the 'ladder' in the first place. We find this view already espoused by Iamblichus in the third to fourth centuries CE:

> The will of the gods is to … reveal themselves (*ekphainesthai*) in human souls … to appear bodily … in the pure and faultless lives of souls.[79]

Proclus articulates the same point in terms of three requirements for *henosis* to be possible: the providential agency of the demiurge; the presence of an aptitude or capacity to receive the providential influx; and the,

> commensurability (*symmetria*) that arises from both and, as it were, their symbiosis (*sympnoia*) and concord (*symphonia*).[80]

That's to say, as we explored when considering the 'paradigmatic virtues,' the cultivation, on the part of the aspirant, of those qualities commensurate with the nature and character of the deity. We can add to this that the aspiration for *henosis* was not viewed solely as an end in itself, but rather as a gateway to the ability to offer a higher order of service entirely; we will explore this concept in due course.

We can gain some insight into the phenomenology of theurgical invocation from Plato's *Phaedrus* wherein we find an exposition of the metaphysics underlying the process of theurgic ascent accorded to Socrates. Its confessional nature is made clear when, in conclusion, we encounter the words,

> Well, all that was for love of a memory that made me stretch out my speech in longing for the past.[81]

The exposition occurs in connection with the so-called 'Allegory of the Chariot' that describes theurgic ascent framed or envisioned through the lens of traditional Hellenic myth. The gods are envisaged as ascending upon horse-drawn chariots towards the supercelestial realms with the theurgists accompanying them in the train or entourage of their chosen deity. The gods make a smooth ascent to the summit of spiritual experience where they are able to, 'gaze upon what is outside heaven,' described as,

> without colour and without shape and without solidity, a being that really is what it is, the subject of all true knowledge, visible only to intelligence, the soul's steersman.[82]

These words are reminiscent of those used to describe the *chôra*, the formless, colourless generatrix from which the constituent elements of

reality are drawn during the process of creation in Plato's *Timaeus*.[83] Its appearance in the context of theurgic ascent underlines its dual use as descriptive of the highest spiritual state of non-dual realisation. The theurgists' 'chariots,' following behind, are pulled by two 'horses'; but the horses are in conflict with one another (as representative of the state of imbalance between the theurgists' spiritual aspirations, on the one hand, and the needs and desires of their lower natures on the other) thereby making the chariots unbalanced and difficult to manage so that even those possessed of the greatest spiritual aspiration can only manage a partial view of the ultimate level of spiritual realisation,

> one that follows a god most closely, making itself most like that god, raises the head of its charioteer up to the place outside and is carried around in the circular motion with the others … this soul does have a view of Reality, just barely.[84]

Again, the comparative ethnography of such 'higher states' supports the gradation of realisations associated with theurgic ascent wherein the degree of preparedness, dedication and, for want of a better word, inner purity or 'blamelessness' are determining factors in the intensity, depth and duration of the resulting states of spiritual realisation. The dialogue then shifts to a consideration of the implications of the spiritual processes undergone, even if 'just barely,' in the context of how one lives one's life measured against the larger horizon of a multi-incarnational perspective.

> Besides, the law of Destiny is this: If any soul becomes a companion to a god and catches sight of any true thing, it will be unharmed until the next circuit; and if it is able to do this every time, it will always be safe.[85]

In addition, living one's life justly, that is, according respect in all one's dealings with others, one of the foundations of living ethically, is implicated in the subsequent fate of the psyche or soul,

> Of all these, any who have led their lives with justice will change to a better fate, and any who have led theirs with injustice, to a worse one. In fact, no soul returns to the place from which it came for ten thousand years.[86]

For ultimately liberation from the grip of *heimarmene* (fate or destiny) depends upon the cultivation of qualities across several lifetimes,

> If, after the third cycle of one thousand years, the last-mentioned souls [the lovers of wisdom or of beauty, or those cultivated in the arts and prone to erotic love] have chosen such a life three times in a row … they depart in the three-thousandth year.[87]

The balance between one's spiritual realisation and one's ethical failings is held to generate nine successively lower 'stations of life' in subsequent incarnations. For our purpose the lowest grade is that of a tyrant, who must be judged for the injustice that they inflicted,

> once their first life is over, they come to judgment; and, once judged, some are condemned to go to places of punishment beneath the earth and pay the full penalty for their injustic.[88]

We find the process of judgment, and specifically the judgement meted out to tyrants, fully articulated in Plato's *Gorgias*. This text will prove essential to forming an understanding of the iconographic program of the Hagia Sophia.

We have reviewed the disciplinary regimes connected with the 'ladder of virtues' in this much detail because its performative nature highlights what adherence to the tradition of the school of Athens actually involved; an understanding that is too often subsumed beneath bland labels such as 'Platonic academy' and 'Neoplatonism.' That this performative bias was always a fundamental feature of the school's approach is underlined by an,

evidently verbatim, exchange recorded in Hermias' *Commentary on Plato's Phaedrus*, a transcript of his lecture notes. During their questioning of Syrianus, Hermias records Proclus querying Syrianus concerning the school's emphasis on performativity,

> we are always ranking telestic above all our other practices and saying that it is superior to human philosophy itself.[89]

When asked which texts he considered to be the most essential, Marinus reports Proclus as saying,

> If I had the power, of all ancient books I would leave in circulation only the Oracles and the *Timaeus*; all the others, I would make them disappear from the eyes of our contemporaries, for they can only harm those who undertake their reading without care and attention![90]

From a contemporary perspective, this is a curious sentiment to find associated with a renowned scholar; but its oddity resides in the fact that we interpret these words through the lens of our own scholarly rather than ritually mediated culture. From the perspective of a school dedicated to the actual attainment of *henosis* – union with the divine – as the crowning summit of its programme of development, scholarship was deemed a means to that end rather than an end in itself; and in that context, the isolated study of texts could only be viewed as a distraction. Nor was such a view unique to the school of Athens: we find a similar sentiment attributed to the third to early fourth century CE theurgist, Iamblichus:

> The rationality that we associate with Greek thinking, the triumph of reason that is the glory of Western culture, was seen by Iamblichus as the loss of a divine way of life that he believed was inscribed by Plato into the very heart of the *Timaeus*, the most influential creation story in the history of Western metaphysics.[91]

In parallel with the ladder of virtues the school also paid particular attention to mathematics and especially to geometry as spiritual tools for further refining the sensibility. The significance of mathematics within the context of hieratic practice, however, is less evident today, but it was an important, indeed pivotal, component of the curriculum; one that combined scholarship with the performativity required to work out the theorems for oneself. Whilst this tendency had its roots in the style of Pythagorean metaphysics and spirituality enunciated in Plato's *Timaeus*, it is of particular relevance in the current context since mathematics – and the metaphysics underlying mathematics – formed the core of the educational discipline undergone by the designers of the Hagia Sophia.

MATHEMATICS AS CONTEMPLATIVE PRACTICE

> Thus Socrates in the *Republic* (527eff) rightly says that, when 'the eye of the soul' is blinded and corrupted by other concerns, mathematics alone can revive and awaken the soul again to the vision of being.
>
> – Proclus[92]

We know that Proclus studied mathematics in Alexandria before travelling to Athens and amongst his oeuvre we find both his *Commentary on the Timaeus*, an extended exegesis of that text's Pythagorean mathematical metaphysics, as well as his *Commentary on the First Book of Euclid's Elements*, a transcript of his lecture notes on the metaphysics underlying Euclid's classic text on geometry, where we find a clear statement of the importance accorded to mathematics in the refinement of the sensibility,

> For the beauty and order of mathematical discourse … bring us into contact with the intelligible world itself and establishes us firmly in the company of things that are always fixed, always resplendent with divine beauty.[93]

This identification of mathematics as the most suitable language for the contemplation of a higher order of reality flowed directly from the Pythagorean cosmogony of Plato's *Timaeus*. Therein, the Pythagorean, Timaeus, describes the process of creation; the key to which being the fact that its animating force, 'soul stuff,' is created using mathematical formulae and then apportioned in order to ensoul the Kosmos and all life forms. For this purpose the demiurge uses,

> a mixture of the Same, of the Other, and of Being; and began making the division in this way: First He took one portion from the whole; then He took a portion double of this; then a third portion, half as much again as the second portion, that is, three times as much as the first; the fourth portion He took was twice as much as the second; the fifth three times as much as the third …[94]

How are we to understand these operations? At least within the school of Athens their non-discursive nature was fully appreciated. Proclus explains that,

> Plato used mathematical language as a cloaking device, casting it as it were over the terms, and [veiling] the true nature of things, just as the theologians used myths, the Pythagoreans employed symbols for the same purpose.[95]

In other words, suprarational subject matter requires a non-discursive, symbolic language to point towards that which cannot be directly described. A genealogy of 'soul-stuff' deriving from mathematical ratio and proportion imbues the subject matter with a mathematical formulation and hence a degree of 'translatability,' and hence utility, that it would otherwise lack. We find Proclus affirming this doctrine in his metaphysical reading of Euclid's *Elements*,

> We must therefore posit the soul as the *generatrix* of mathematical forms and ideas. And if we say that the soul produces them by having their patterns in her own essence and that these offspring are the projections of forms previously existing in her, we shall be in agreement with Plato and shall have found the truth with regard to mathematical being.[96]

Since the soul has this innate knowledge, the practice of mathematics is one way of contemplating the higher, suprarational dimensions of existence and so-further refining one's sensibility – which is the practical purpose of these operations. Unlike reading and contemplating texts, mathematics demands a different form of engagement. We can say that the 'practice' of mathematics moves the student towards a far more performative engagement with its material since mathematical proofs need to be 'worked out' to experience the beauty and utility of their propositions; and this is especially so for geometrical proofs, which require that we physically reconstitute their spatial vectors in order to understand them. Since we are, ultimately concerned to understand the Hagia Sophia as the outcome of a thematic conception realised by its designers through their associations with this spiritual community, however strange the 'machinery' of creation described in the *Timaeus* may appear to us, its metaphysically inflected mathematical outlook is more conducive to translation into architectural form than any literary or mythical narratives, which are more amenable to expression through decorative design.

GEOMETRICAL FORMS, HARMONIC AND MATHEMATICAL RATIOS

> All that is good is beautiful, and the beautiful is not without due measure.
>
> – Plato, *Timaeus* 87c

Unsurprisingly, perhaps, even to the naked eye, one of the greatest buildings hitherto devised demonstrates clear signs of an advanced geometric and mathematical design in its layout and structure. If nothing else, the educational requirements expected of a *mechanikos* in that age should convince us that the breadth of their intellectual training alone would lead to such multidisciplinary sophistication. Given what we have now gleaned concerning their Hellenistic metaphysical educational background, the architecture is clearly intended to evoke the essential order of the 'intelligible' world, standing above and beyond the transient 'sensible' world of appearances. Within this tradition proportionality and the disciplines of astronomy, astrology, optics and musical harmony stand in as the crowning 'languages' used to articulate their metaphysical outlook. We will focus on just two or three key elements derived from the *Timaeus*

that help to illuminate the underlying worldview of the designers. Since the following section refers exclusively to Plato's *Timaeus* it will be more convenient to cite the relevant portions in-text. As we will see, the primarily literary nature of the *Timaeus* is writ large throughout. It was a text that possessed particular resonance for the school of Athens, its essential Pythagoreanism laying the foundations for a purely metaphysical interpretation of mathematics. In setting out the ideal mathematical forms, proportions and ratios constitutive of, and therefore underlying, reality, the *Timaeus* was one of the seminal texts for those who had recourse to mathematics in their day to day lives, and nowhere was this more self-evidently the case than for the members of the profession of *mechanikos*.

The importance of the dialogue in the present context is only partially based upon the specific items of information that we can glean from it – metaphysical concepts, mathematical ratios and geometric forms; rather its importance resides in the fact that it furnishes us with essential insight into the spiritual outlook of this community. The *Timaeus* proffers two versions of the process of creation so that it is necessary to move back and forth between them in order to piece together a coherent account. Almost immediately we enter the main topic of the dialogue: its creation myth, which commences with the craftsman deity's (*demiourgos*) perception of the 'Good' which prompts him to duplicate its intrinsic perfection or beauty (*kallistos*). He therefore forms a 'mental' model (paradeigm) of this perfection (28b) that will subsequently be rendered in terms of geometrical proportion and mathematical and harmonic ratios. The first stage involves the creation of all that is, the Kosmos in the perfect shape of a sphere (33b). The demiurge draws the elements (which, at this stage, exist in a state of flux without a fixed nature) from a shapeless, formless receptacle, or *hupodochê* (49ab), that is itself entirely devoid of qualities (50d–e). This receptacle is called the *chôra* (52b) and serves as the generatrix of the chaotic elements that will be ordered and used to constitute reality (50d, 51a). The demiurge stabilises the four elements – fire, earth, air and water (53b) – as solid bodies utilising a triangle as their basic structural element (54a–55b) to produce the so-called 'Platonic solids' (54d–55c),

> The tetrahedron or pyramid (*molecule of fire*)
> The octahedron (*molecule of air*)
> The icosahedron (*molecule of water*)
> The cube, composed of 6 × 4 rectangular isosceles triangles (*molecule of earth*)

The intelligible world then serves as the model or template for the creation of the 'sensible world,' the world of matter, which is formed out of the raw chaos of primal matter (30a). During this process proportionality is introduced to bring about both the structuring and ensoulment of the sensible world,

> He constructed reason within soul and soul within body as He fashioned the All … this Cosmos has come into existence as a Living Creature endowed with soul and reason. (30b)

The 'soul-stuff' that infuses all creation is produced from a mixture of 'Same,' 'Other' and 'Being' (35a) (we need not worry about relating these terms to normal discourse). Taking a portion of this substance and then either doubling or tripling it (35b) to generate the following numbers: 1, 2, 3, 4, 9, 8, 27 (35c); a series that is more easily understood as two separate sequences as follows,

1 (doubled =) 2 (doubled =) 4 (doubled =) 8
1 (trebled =) 3 (trebled =) 9 (trebled =) 27

Having separated and arranged these two portions the demiurge then rejoins them to each other by introducing intermediate (harmonic and arithmetic) proportions: 3:2, 4:3, 9:8 (36a) and 256:243; ratios that are recognisable as those underlying musical harmony (though omitting the 2:1 ratio of the octave) and referred to as the Pythagorean scale as follows,

3:2 perfect fifth
4:3 perfect fourth
9:8 major second
256:243 minor second

From this ensouled substance the demiurge then created two bands: an outer circle, of the 'identical/same' (36b) and an inner circle of the 'different' (36c). The inner circle is then divided into 7 smaller circles (36d). These circles – the 'outer' representing the fixed stars and the 'different' the seven planets – extends the 'design' to incorporate the periodicities of the celestial world and hence the validity and importance of astronomy for understanding the deep structure of reality and astrology for leveraging that insight to determine, or elect, the most appropriate dates for commencing, or delaying, an operation. In Plato's more picturesque account of the metaphysical structure of reality (in book ten of the *Republic*) we learn that a Siren sits upon each of the nested celestial spheres emitting a single note, the concourse of which constitutes the 'Harmony of the Spheres';[97] so that astronomy is specifically connected with musical harmony as well as geometrical and arithmetical form. We also learn that all of the levels of reality are pierced through by a shaft that imparts *heimarmene* – destiny or fate – to every level of the universe.[98]

What this very broad overview of the *Timaeus* provides us with is the fact that the *mechanikoi* of the Hagia Sophia would be thinking in terms of proportionality along multiple vectors: mathematical, stereometrical, optical, harmonic and celestial as they sought to realise a structural form (*sumbola*) to express their chosen theme. Not only should it recapitulate the process of creation, it should do so in ways that – through the incorporation of such sensory elements as the choice of materials and the reflectivity of both light and sound (*sunthemata*) would resonate with the shared proportions of human ensoulment; in this way amplifying and drawing forth, by force of natural sympathy, a phenomenological impulse towards *henosis* or union with the divine. The sophistication implied by this spiritual vision was one that had evolved over millennia; encompassed multiple

states of being – incarnate as well as disincarnate; as well as multiple levels of being – human as well as the other-than-human, *daemones* and deities. These formulae also encoded a profound sense of higher purpose; that of taking incarnation in order to enact a fundamental shift in human spiritual awareness; an idea that we find resumed within the concept of 'the offspring of the gods' and membership of a 'divine race.'

THE OFFSPRING OF THE GODS

> Plotinus and Origen, and likewise Porphyry and Iamblichus and their successors, many as were born of the divine … race, down to Plutarch the Athenian … all these sang in tune with the purified philosophy of Plato.
>
> – Hierocles of Alexandria, *On Providence*

The characterisation of the Hellenistic spiritual tradition as descended from a divine race and united through singing in tune with the philosophy of Plato made by Hierocles of Alexandria, one of the school of Athens' earliest disciples, highlights the three key facets that define the school's self construction as a spiritual community. We have seen that the 'purified philosophy of Plato' relates to the style of hieratic interpretation applied to the school's preferred texts and to the emphasis accorded to those recurrent Pythagorean, Orphic and telestic elements found throughout them. The fact that this outlook was so widely shared allowed the followers of the various traditions of Hellenistic spiritual culture (for example, those associated with Plotinus, Iamblichus and Plutarch of Athens) to be thought of as 'in tune' with one another. We can attribute this commonality of vision as stemming from the sentiment that, as Proclus summarised it, 'All

the Greeks' theology is the offspring of Orphic mystical doctrine.'[99] Returning to the notion that the followers of this tradition constituted a divine race, Proclus clarifies its meaning in language that shares the same conceptions that we found in relation to theurgy,

> Who, then, are these people and what is the understanding (gnosis) that belongs to them? Well, in the first place, they are 'offspring of the gods' and 'clearly know their own parents.' They are offspring and children of the gods in as much as they conserve the form of the god who presides over them through their current way of life … All souls are therefore children of god, but not all of them have recognised the gods whose children they are.[100]

Proclus here appears to allude to the fact that the disciplinary practice of the virtues when coupled with telestic rites forms an indelible connection with a deity that endures from life to life; and therefore may well predate one's present life. In the light of this, Marinus underlines the intimacy of the relationship between Proclus and the goddess Athena,

> At birth he was welcomed by the Constantinopolitan goddess Poliouchos [Athena], who as it were assisted his mother in childbirth. She might have been considered the cause of his life, because he was born in the town she protects and saves; and who, when he reached childhood and youth, made him live well: for she appeared to him in a dream inducing him to follow philosophy. That is how he began so close an intimacy with the goddess, so that he sacrificed especially to her, and practiced her precepts with the greatest enthusiasm.[101]

This level of mutual recognition evidently requires a cooperative alignment with the deity's spiritual qualities; as we saw, this is one of the conditions outlined by Proclus as necessary for receiving their providential care.

As we noted earlier, the ascent towards *henosis* is merely the first, preparatory phase of a movement that includes a continued – and continuous – descent back into incarnation. For whilst freeing oneself from heimarmene through rites and dedicated service serves to end the mechanism underpinning involuntary metempsychosis, the illumined soul is nevertheless ethically obliged to knowingly incarnate in order to turn their illumination to practical service.[102] The purpose of this voluntary incarnation, of performing that 'labour' which must be shared, is,

> to compel the best natures to attain the knowledge which we pronounced the greatest, and to win to the vision of the good, to scale that ascent.[103]

The succession of illumined teachers, the *diadochi* or successors, therefore provided, as Hierocles states, the 'purified philosophy of Plato'; that's to say, a hieratic, illumined interpretation that facilitated the student's assimilation of the hierarchy of virtues into their lives and the rites and rituals that brought their spiritual aspiration to fruition. In words that are almost identical to those of Hierocles, we find Proclus endorsing the same ideas,

> These interpreters of the *epopteia* (or mystic speculations) of Plato, who have unfolded to us all-sacred narrations of divine concerns, and who were allotted a nature similar to their leader, I should determine to be the Egyptian Plotinus, and those who received the theory from him, I mean Amelius and Porphyry … Iamblichus and Theodorus, and any others … following this divine choir, have energised about the doctrines of Plato with a divinely inspired mind.[104]

The repeated reference to the metaphor of 'singing in tune' and of a 'divine choir' underlines the extent to which the school's mindset was predicated on the notion of enunciating a common body of spiritual truths. It is indicative of the depth of the community's spiritual outlook that

Proclus describes his teacher, Syrianus, as 'filled with divine truth,' and as having incarnated specifically for the task of teaching others. Proclus evidently believed that he too was a legitimate link in this chain of serially incarnating, enlightened teachers, a reincarnation of a famous Pythagorean, Nicomachus of Gerasa,

> in a dream he had clearly seen that he belonged to the Hermetic Chain; and, on the authority of a dream, he was convinced that his was the reincarnated soul of the Pythagorean Nicomachus.[105]

We find here the first reference to the line of *diadochi*, or successors, as constituting a 'Hermetic Chain,' that's to say, a serially incarnating body of illumined spiritual teachers; needless to say, this reference confers a profoundly esoteric, rather than merely conventional, understanding upon the terminology and spiritual ancestry of the members of the 'divine race.' We will shortly find it being referred to as a 'Golden Chain,' a reference that we can, henceforth, interpret in an esoteric rather than mundane sense. That these beliefs were shared throughout this tradition is demonstrated by its final scholarch, Damascius, who assumed the role of scholarch thirty years after Proclus' death. In his *Life of Isidore* he describes how his teacher Isidore's soul,

> Flying down from the vault of heaven, attached itself to life on earth.[106]

The phrase 'vault of heaven' is, once more, a reference to the highest point of theurgic ascent as described in Plato's *Phaedrus*.[107] The school's operating assumption, then, was that certain souls – the members of this divine race – take incarnation, age upon age, expressly for the purpose of assisting humanity's spiritual evolution. In support of this mission, one of their responsibilities would be to find, before death, worthy successors and to train and direct them into appropriate positions where they could fulfil their own spiritual destiny as well as the larger 'work' of the spiritual

redemption of humanity – and perhaps, of all sentient life. It therefore behoved each 'successor' to find that uniquely qualified incarnation to succeed them. Indeed, just as Proclus was, in his youth, identified by Plutarch of Athens and Syrianus as 'the one' who had incarnated for, and was perfectly suited to this role, Damascius, describes how Proclus, in his final years, spent his time actively seeking to identify that unique individual destined to succeed him,

> For the final five years of his life Proclus was consumed by the task of finding a healthy and able successor because he was, 'fearful that the truly Golden Chain of Plato might abandon our city of Athens.'[108, 109]

We can draw two conclusions from the foregoing: firstly, that the 'school of Athens' was a pan-Hellenistic spiritual community rather than merely another philosophical school (of which Athens possessed many); and secondly, that its dedication to providing a comprehensive system of spiritual development within a multi-incarnational perspective is suggestive of the existence of a larger framework or mission aimed at facilitating a specific longterm outcome; and therefore of the presence of what we can call a millenarian agenda. Let's now tentatively characterise that agenda, conditional upon uncovering further evidence, as one of hastening the return of the Golden Age and the reign of Kronos.

THE FACE OF TYRANNY AND SPIRITUAL DISSENT

Virtue as a political imperative

> though the soul may be forced by tyrants to profess an impious doctrine, she can never be forced to inner assent and to belief.
>
> – Ammonius Hermias[110]

The Justinianic despotism of the sixth century was as extreme a form of tyranny as it is possible to imagine; the criminalisation of private beliefs, policed by spies and informers,[111] constituting a panopticon in which, irrespective of one's beliefs and practices, uncertainty reigned over whether one was being watched or even considered for arrest. Ascending to the throne late in 527 CE Justinian ordered the first 'great persecution of pagans' in 529 CE.[112] Arrest on suspicion of harbouring Hellenistic beliefs and practices attracted the direst penalties; the confiscation of wealth and property, torture, forced conversion and, for the unrepentant or the apostate, execution. Alongside these depredations Hellenistic statues were defaced and Hellenistic literature was burned. Whilst the full scope of the persecution of non-Orthodox religious belief during the age of Justinian is outside the scope of the present work, we can gain a flavour of how it

affected the cosmopolitan population of Constantinople as seen through the eyes of its chief perpetrator, the zealot John of Ephesus, who also led the terror in the second 'great' persecution of 546 CE,

> In the nineteenth year of the Emperor Justinian, they were busy, thanks to my zeal, with the matter of the pagans who were discovered in Constantinople. These were illustrious and noble men, with a host of grammarians, sophists, scholastics and physicians. When they were discovered and, thanks to torture, denounced themselves, they were seized, flogged, imprisoned, and sent to the churches so that they might learn the Christian faith as was appropriate for pagans.[113]

Of any city ruled by a tyrant Plato averred, 'do you think you will find more lamentations and groans and wailing and anguish in any other city?'[114] In the *Republic* Plato held that cosmic law demands that tyrants answer for their crimes. He especially singles out one Ardiaeus to serve as an example of the course of torment they are subjected to before being flung, unceremoniously, along with all the other tyrants, into the great pit of the underworld, Tartarus, for all time,

> Ardiaeus and others they bound hand and foot and head and flung down and flayed them and dragged them by the wayside, carding them on thorns and signifying to those who from time to time passed by for what cause they were borne away, and that they were to be hurled into Tartarus.[115]

Tyranny, inevitably, creates its own opposition; and we need to take account of this fact in assessing the reaction of Hellenists, especially those who held to their traditional culture and beliefs. We should anticipate the emergence of an 'infrapolitics,' that 'wide variety of low-profile forms of resistance that dare not speak in their own name,'[116] the discreet, but nevertheless assertive, self-presentation of Hellenism via 'hidden transcripts.'[117]

Amongst these 'hidden transcripts' one of the most obvious forms is signalling the fact of being constrained by ostentatiously remarking upon one's own self-censorship in the face of power (we find evidence of this amongst such leading Hellenists as Damascius, Simplicius, and Olympiodorus the Younger. When commenting upon a text less fulsomely than they would have liked, they characterised their commentary as 'appropriate to' or 'adapted to' the prevailing circumstances, thereby alluding to the fact that they are engaged in censoring themselves).[118] Another strategy was that of attributing disreputable actions to a group without actually naming them but providing sufficient context for their subsequent identification (for example, Eunapius' reference to the destruction of the sanctuary of Eleusis by 'the impiety of the men clad in black raiment,'[119] a circumlocution by means of which he points to the culpability of the Arian monks who accompanied the Visigoths into Greece). On a more sophisticated level, the discourse of the public domain can be infiltrated by polysemous phraseology that uses veiled language to mock and otherwise denigrate its subject (for example, Procopius' apparently eulogistic references to Justinian in his *History of the Wars*[120] and *On Buildings*,[121] which contain subtle traces of mockery discernible by 'those in the know');[122] by the creation of an openly subversive narrative designed for circulation amongst a closed circle, or for publication after the author's death (again, Procopius' vituperative *Secret History*, which possibly did the rounds of his inner circle even whilst he was still alive); and finally, by the appropriation of an official discourse to insert a countervailing narrative within it. Naturally, such strategies require skilled handling as well as the influence necessary to thrust them into the public domain; but once situated their effects are more likely to be of an enduring, subversive and damaging kind.

There are two further – contested – examples that we can mention in this context. Firstly, the last scholarch Damascius' composition of an ambivalently Christianised version of Proclus' metaphysics that was then

attributed to a fictional figure; a first century CE Christian convert of St Paul named Dionysius the Areopagite. This particular gambit resulted in the creation of a systematic text of 'Christian' theology – with scant actual references to anything distinctly 'Christian.' Launched into the world, it entered, and powerfully influenced, mainstream Christian theological discourse for centuries – and indeed, continues to do so to this day.[123] Secondly, as will become clearer as our narrative unfolds, mingled with the mainstream discourses associated with the subject of this work, the Hagia Sophia, are 'prompts' – enigmas, hints, clues – pointing towards a countervailing narrative within the body of the building itself. Although the influence of a generic 'Neoplatonism' is generally acknowledged, in particular with respect to the structural design and the modelling of light[124] and sound,[125] the precise nature of this influence and its implications for the building's thematic design remains unrecognised.

We have already examined the profound spiritual belief system of the school of Athens. Implicit within its multi-incarnational spiritual mission to deliver actual spiritual transcendence, was a duty of care towards preserving that knowledge and its initiatory traditions. We saw this evidenced, firstly, in the care taken to prepare Asclepigenia to continue the conduct of the initiatory rites of the mysteries of Eleusis – a care that she would have felt beholden to repeat with a suitable candidate before her own death; and secondly, in the care taken to identify and prepare suitable *diadochi* – successors – trained and capable of carrying the spiritual mission forward from generation to generation. Given this otherworldly spiritual commitment, the scholarchs and followers of the school of Athens would have felt a spiritual imperative to preserve their system of belief and practices in the face of the imperially sanctioned suppression being increasingly imposed upon them. Indeed, their core texts implied just such a responsibility; for the very existence of tyranny had a spiritual dimension – had, as it were, its roots within the sphere of that larger, invisible reality whose ultimate conception was a concept of justice embedded within and defining the cosmic order,

> wise men tell us, Callicles, that heaven and earth and gods and men are held together by communion and friendship, by orderliness, temperance, and justice.[126]

Tyranny, therefore, is a violation of cosmic law. As we saw earlier, an integral part of the school of Athens' spiritual path involved an incremental program of ethical development known as the ladder of virtues. Having realised a state of theurgical union or henosis, the illumined soul – in line with Plato's exhortation[127] – would grasp the ethical imperative to descend into successive incarnations and seek out opportunities to contribute towards the spiritual progress of all those open to that ideal on a personal, institutional and political level. Indeed, Marinus tells us that this is exactly what Proclus did in the context of Athens' day to day political and civic life;[128] and it is also attested to by Aedesia's renowned charitable works in Alexandria.[129]

Integral to Plato's vision of the state was a categorisation of constitutional types – aristocracy, timocracy, oligarchy, democracy, and tyranny – wherein tyranny (the condition about which he had the most to say) was a state bereft of the enlightened rulership that comes from the perfection of the virtues, in other words, a state based fundamentally upon injustice. Proclus' *Commentary on the Republic* makes a number of references to the Platonic tyrant, but most extensively[130] in his exegesis of the eschatalogical book ten of the *Republic* – the Myth of Er. Therein we learn that a soul chooses to incarnate as a tyrant based upon an attraction to wealth and power in a previous life combined with a lack of ethical development. This,

> tyrannical life of the soul … represents the maximum of moral injustice, i.e. a soul ruled not by reason but by the unlimited desire for pleasure or money.[131]

To illustrate this existential state recourse was made to the metaphor of the Gigantomachia – the war fought between the gods of reason and the giants, creatures of unreflective desire;[132] or alternatively, the fallen life of the Titans. From this perspective, tyranny represents counterfeit rulership, one driven by the satisfaction of personal desires rather than responsibility for the larger community; and for Plato this ethical failure makes the tyrant an enemy of the cosmic order itself, whose actions are in essence counter-initiatory. Plato's *Gorgias* – the text that Olympiodorus reported Ammonius lecturing on in Alexandria – is in full accord with the *Republic* with respect to the fate of tyrants,

> in the time of Kronos there was a law concerning mankind, and it holds to this very day amongst the gods, that every man who has passed a just and holy life departs after his decease to the Isles of the Blessed, and dwells in all happiness apart from ill; but whoever has lived unjustly and impiously goes to the dungeon of requital and penance which, you know, they call Tartarus.[133]

With this passage we take a step closer to identifying the key elements of the traditional mythical landscape of Elysium whose earliest mention occurs in Homer's *Odyssey*.[134] In Plato's dialogues we find this mythic realm transformed into a metaphoric eschatological landscape wherein the cosmic order, cosmic law, divine justice and tyranny all find their place in relation to the multi-incarnational judgement of souls. We will subsequently need to trace the origins and full scope of this landscape as we begin to decode the clues embedded in the fabric of the building's decorative design. As we noted at the beginning of this section, in 529 CE Justinian instituted 'a great persecution of pagans' in Constantinople which included high officials, many of whom would have been well-educated Hellenists.[135] In addition he ordered the closure of all Hellenistic establishments; and with a series of further orders, issued in 531 CE, he appears to have specifically targeted the school of Athens by forbidding bequests, the school's main source of

income, and ordering the confiscation of any property used to promote Hellenistic teaching. At around this time the building hitherto used by the school of Athens reverted to the descendants of the Eumolpidae, possibly to avoid its confiscation under the new restrictions. New premises were obtained and are currently assumed to be a group of houses called the 'Areopagus Houses' (A, B and C).[136, 137] How long the new premises were able to operate is unknown but, with the odds stacked so heavily against them, a decision appears to have been taken to pre-empt their seizure by closing the school and disposing of its assets, including what, by then, must have been a fairly sizeable library. The school's ritual statuary was carefully cached, intact, and sealed into the buildings' wells to preserve it from being broken up or disfigured. Subsequently House C was converted to Christian use for the Bishop of Athens, with any remaining Hellenistic imagery being defaced.[138, 139] The recovery of at least some of the statuary from the wells, essentially a 'time capsule' providing us with first-hand evidence of the patterns of ritual activity during the school's later stages, included 'statues of Heracles and Hermes, heads of Nemesis and Helios, a statuette of a seated philosopher, and statuettes of Tyche, Serapis and Asclepius'; other finds in the vicinity of the buildings included both Egyptian and Mithraic items.[140] Evidently Proclus' practice of honouring the deities of every tradition was still being maintained.

The fate of the philosopher-theurgists of the school of Athens after 531 CE is unknown and to a degree speculative. Against a background of increasingly oppressive legislation, and an earlier persecution of Hellenists in Constantinople that commenced in 529 CE, tradition holds that Damascius lead a group of his inner circle into exile in Persia. Accounts of the itinerary of this journey are, however, contested;[141] nevertheless one popular account holds that, disappointed with their reception in Persia, they returned to their respective home towns. In Simplicius' case it has been speculated that he settled in Harran, on the border between the

Byzantine and Persian spheres of influence, from where a current of Late Platonism appears to have entered early Islamic philosophical thought.[142]

We now have a clear line of spiritual and intellectual descent to help us to position the tradition within which the designers of the Hagia Sophia were educated and with which they enjoyed the greatest intimacy; a tradition when described as merely philosophical or metaphysical, fails to do justice to the depth of Hellenistic devotional and spiritual practice that lay at its very core; and, we may even add, its 'missionary zeal' under extremely adverse circumstances; for this movement sought to maintain the initiatory tradition of the mysteries of Eleusis and the profound spiritual purpose which it embodied against the rising tide of imperially sanctioned belief. At root, the philosopher-theurgists were challenged to retain the ethical integrity that was the foundation of their spiritual life and commitment in this and subsequent lives. Consequent upon this was a commitment to repeatedly return and continue to exert a positive influence on the ethical and spiritual lives of those they encountered, knowing that all tyrannies threatened the cosmic order and the spiritual lives of all affected by them. The final chapter of the school of Athens was lived out on another continent, in that great centre of learning, and Egyptian and Hellenistic culture, from which it had derived the majority of its students and its greatest support, Alexandria.

ALEXANDRIA

The last of the Hellenistic teachers

That Proclus and Asclepigenia remained the guiding lights of the Athenian school for half a century served to consolidate its spiritual outlook, teaching and authority. However, with their deaths in 485 CE the school appears to have struggled to find adequate leadership. Isidore of Alexandria, who was accorded the title of *diadochus* (successor) on the strength of his evident intellectual and spiritual gifts, ultimately declined the office of scholarch and returned to Alexandria.[143] Despite this, for something like thirty years – from 485 CE to 515 CE when Damascius assumed the role of scholarch and commenced a reorganisation of the school – it nevertheless continued to attract some of the most gifted intellectuals of late antiquity.

During this period the leading Hellenistic philosopher was Hermias and Aedesia's son, Ammonius (sometimes referred to as Ammonius Hermias to distinguish him from Ammonius Saccas who lived two centuries earlier), in whose education and upbringing Proclus had taken such a special interest. Around 470 CE Ammonius returned to Alexandria to take up a teaching position kept open for him at Aedesia's request at the Hellenistic school of Horapollo;[144] there he prepared a number of outstanding Hellenistic scholars, including the next generation of philosopher-theurgists, who went

on to the school of Athens. These included Asclepius, Damascius, Simplicius and Olympiodorus the Younger; with Damascius progressing to serve as the school of Athens' final scholarch.

The scholarch of Alexandria's school of Horapollo, Flavius Horapollo the Younger, hailed from an influential Egyptian pagan family. His father and uncle (Asclepiades and Heraiskos) were devout followers of the ancient Egyptian gods and practicing ritualists.[145] Away from the school Horapollo maintained a temple of Isis to which a select inner circle of students were invited to undertake traditional Egyptian ritual practices. The school offered both Hellenistic philosophy and rhetoric and it was there that Ammonius commenced teaching the style of Hellenistic philosophy that he had learned from Proclus in Athens. Although Damascius singles Ammonius out as an expert commentator on Aristotle and possessed of outstanding expertise in geometry and astronomy, ranking him amongst the foremost practitioners of any age,[146] it was, predictably, his Hellenistic teaching that became the source of conflict with Alexandria's Christian zealots. Unlike Athens, which retained its Hellenistic religious culture well into the late fifth century, the extensive Christian presence in Alexandria meant that a substantial number of the school's students were Christian and were therefore fully exposed to Ammonius' performatively inflected Hellenistic cultural and educational tradition.

Intermittently, throughout the fourth, fifth and sixth centuries, Alexandria was wracked by sectarian strife. The various Christian sects attacked one another, sometimes violently; the dominant Monophysites were in constant theological conflict with the Orthodox authorities in Constantinople; and the more zealous Christians were fiercely opposed to the residual Hellenists and pagans – some of whom, at quite senior levels of the government, sheltered anonymously within Christian ranks. Disturbances permeated the schools whose mixed classes of Christians and Hellenists encouraged conversions, in both directions, that created a volatile, polarised, polemical and, at times, violent educational space. Around 480 CE, whilst Ammonius was teaching at the school of Horapollo,

further religious disturbances appear to have forced him to broker a deal with the Patriarch, Peter Mongus, though what the precise terms of this understanding were we do not know. Given the tradition within which Ammonius was steeped, it would be fair to assume that it involved an agreement to engage in a much more discreet handling of the anti-Christian implications of Platonic metaphysics during his public lectures – which still included teaching Plato[147] – and to cease promoting the devotional, initiatory and theurgical traditions of the school of Athens; perhaps transferring awareness of their practice to a more discreet domain.[148] Ammonius' politic accommodation of the authorities caused Damascius, by then in Athens, to criticise him for giving too much ground.[149] That said, his handling of the situation served to defuse the tension and preserve the Hellenistic teaching tradition, albeit in a far more discreet manner; a factor, perhaps, in his reputation, today, as more an exegete of Aristotelianism than the more typically performative Hellenism of the school of Athens.[150] Damascius' description of Ammonius as perhaps one of the most gifted mathematicians and astronomers not only of the school of Athens but possibly of any age is a factor that we need to bear in mind when we consider his choice of successor, Eutocius of Ascalon,[151] and why the *mechanikoi*, Anthemius and Isidorus, were so closely aligned with this Alexandrian lineage. Eutocius, in turn, was eventually succeeded by one of Ammonius' younger students and a convinced Hellenist, Olympiodorus the Younger. Of his teaching it is said that,

> He did not withdraw from the philosophical positions that typified later ancient Platonism. Instead, his students encountered a wholesale defender of the webwork of Hellenic *paideia*, who professed traditionally pagan views about contentious philosophical topics including the eternity of the natural world, the reverence of stone images, the transmigration of souls, the nature of daimones, and even the virtue of ritual theurgy …[152]

We can be fairly confident, therefore, that representatives of the tradition of the school of Athens, and therefore of the spiritual lineage descending ultimately from the rites of Eleusis, were still teaching up to the time of Olympiodorus' death in 565 CE. Within this tradition – as we saw in the context of Proclus' commentaries on both Plato's *Timaeus* and Euclid's *Elements* – mathematics generally, and geometry in particular, were intrinsically related with the structure of the intelligible world, so that the contemplation of mathematical truths itself constituted a form of spiritual practice. A further imperial investigation of Alexandria's Hellenists conducted between 487 and 488 CE saw many vacate Alexandria, leaving Ammonius as,

> the only prominent philosophical teacher in Alexandria after these investigations, or persecutions, and he continued to teach until his death many years later.[153]

Confirming this, Olympiodorus the Younger claimed to have heard Ammonius lecture on Plato's *Gorgias* as late as 515 CE.[154] As we noted, another of Ammonius' students and his 'dearest friend' was the philosopher and mathematician Eutocius of Ascalon who succeeded Ammonius after his death around 520 CE. Such was the closeness of their relationship that Eutocius dedicated his work to Ammonius,

> Each of the two books of Eutocius' commentary on Archimedes' *On the Sphere and the Cylinder* … was dedicated to Ammonius.[155]

As Ammonius' successor, Eutocius was both a tutor to and personal friend of the Hagia Sophia's designers – Anthemius of Tralles and another student, Isidorus of Miletus,

> Anthemius, then, was the 'dear friend' of the leading Hellenistic philosopher in Alexandria (Eutokios) and possibly the student of

another (Ammonius).[156]

The *mechanikoi* who designed the Hagia Sophia were prominently connected with this tradition, albeit at the tail-end of its power and influence. They both hailed from Ionia, a region of Anatolia (south of the modern Izmir) that was still, to all intents and purposes, both largely pagan in its rural life and Hellenistic in its urban outlook and culture. The great, thirty year long, effort to suppress its Hellenistic culture, centered on Anthemius' home town of Tralles, which commenced under John of Ephesus in 546 CE, was still in the future when, we would guess, sometime around 530 CE the *mechanikoi* were summoned to Constantinople for consultations on a great project to replace the imperial palace's old basilican church. As *mechanikoi*, they embodied the most advanced levels of education then available and had enjoyed a strong personal and paideitic relationship with Eutocius, and possibly, with Ammonius as well. The combination of these factors alone strongly favors the idea that, at root, they subscribed to a Hellenistic outlook and belief system. We therefore need to be alert to any clues suggestive of the spiritual geometries and eschatological myths of the Hellenistic metaphysical universe as we examine the building's structural and decorative design and seek to discern what thematic conception might have governed it; but in doing so, we need to remain mindful of the tyranny then actively seeking to crush this visionary worldview at the very heart of the Empire, in Constantinople. As we saw, even after the passing of Ammonius and Eutocius, Ammonius' student, Olympiodorus the Younger, was still teaching Platonic metaphysics in the, by then, staunchly Christian world of Alexandria as late as 565 CE – a fact that stands in stark contrast to Justinian's continued oppression of Hellenists and Hellenism elsewhere.[157]

CONSTANTINOPLE

The city as palimpsest and the erasure of the past

The present building called the Hagia Sophia emerged, quite literally, from the ashes of the century old basilican church that had previously stood on that spot. In the aftermath of the Nika Riots (insurrection is a more apt characterisation) Justinian's overarching ambition was to stamp the city with such a visible imprimatur of his rulership that the recent attempt to usurp him by the Hippodrome factions – fronting, presumably, for the old Byzantine aristocratic families – would forever be relegated to history; a history divided between the (unmentionable) time before the rebuilding and the (to be celebrated) time after. Tyrants have ever sought to erase memory – the one thread that allows the past to inform our understanding of the present – through the erasure and reinscription of the fabric of the city, treating it as a giant palimpsest.

Overshadowing Justinian at every turn, and dominating the city's skyline, was the Hagios Polyeuktos, a church erected by Princess Anicia Juliana, a scion of at least three emperors who evidently served as a rallying point for the old Byzantine aristocracy, and a constant reminder to Justinian of their wealth and power, of her family's imperial ancestry and legitimacy, when contrasted with his own aristocratic deficit.[158] For

Justinian had ascended to the purple solely by virtue of his uncle – an illiterate swineherd from the Balkans who, through a mixture of strength of arms and cunning, had risen to head the Praetorian Guard and from there launched himself at the imperial throne through a mix of bribery and brute force. One can't but ponder the psychological implications of the evident class divide, a crisis of legitimacy in the respective factions' perception of each other, shadowed forth in the uprising.

The uprising against Justinian commenced on the 13th January 532 CE. Justinian used his wife's connections with one of the Hippodrome factions to buy them off, after which the army massacred anywhere between 30,000 and 50,000 people still remaining within the confines of the Hippodrome; others were sent into exile, along with Juliana's son, Olybrius, and the wealth and property of members of the elite families, including Anicia Juliana's palace and the Hagios Polyeuktos, were seized.[159] With one blow Justinian removed the focal point of opposition to his reign, laid his hands on their wealth and property, and possibly gained the opportunity to oversee, if not hasten, the steady decline of the chief architectural rival to his planned church. For in the context of the city's buildings, the Hagios Polyeuktos had been positioned on the open, south-eastern slope of the fourth hill. Not only was it the largest structure encountered by a visitor as they approached the city by road, it was raised some five metres on its foundations to make it unavoidably visible from most of the city.[160] Since it appears to have dwarfed every other church, it inevitably served as the benchmark against which the size, architectural form and interior decoration of the Hagia Sophia would be judged. Set out on a base of 100 by 100 royal cubits (approximately 52m × 52m) it thereby utilised an ancient system of measurement reserved for the most important sacred structures. Its interior was decorated with exotic themes – peacocks, palm trees and grape-clustered vines that served to draw attention to the idea that it was a realisation of the biblical Temple of Solomon.[161] In addition, the fabric of the building was used to showcase Anicia Juliana's wealth and piety whilst an extensive stone-carved text circling the interior walls broadcast her family's imperial lineage – and hence their right, by birth, to

the imperial purple.[162] The sad state of the ruins today – a large depression in the ground within which some few traces of cellar walls are still visible – cannot but make us reflect whether this politically provocative church was deliberately neglected and allowed to fall into ruin. The wealth of gold that Justinian was said to have tried to extract from the aged Juliana before her death in 527/528 CE was, according to legend, instead melted down and used by her to cover the church's ceiling, placing it beyond Justinian's immediate grasp[163] – at least until he could seize the property.[164]

Faced with a project of unprecedented scope and scale, a project for which they would be responsible at every stage from its conceptual design to its realisation, the *mechanikoi* would surely have been tempted to fall back upon tried and trusted building designs and procedures; instead, they formulated an ambitious design that exceeded by far the design principles that had governed building up to that time. That they should undertake this degree of innovation and attendant risk in the face of the climate of fear imposed by Justinian's regime and recent massacre, marks the fact that they had decided to use this opportunity to develop a design that expressed a theme which would convey an enduring spiritual message. This is not the dissent that seeks political change or reform, but rather a form of spiritual dissent that strives to preserve and reemphasise, on a societal level, higher-order ethical values beyond the materialism, nepotism and corruption that are the hallmarks of tyranny. Such acts – such 'hidden transcripts' – when they reach critical mass in terms of their presence, durability and, in particular, the higher order ethical values to which they attest, have been described as 'charismatic' gestures, 'that no one … yet had the courage to declare in the teeth of power.'[165]

To begin the process of prising this enigma open, we need to interrogate a well-informed contemporary's point of view. How, for example, did that consummate court insider and Hellenist, advisor at the centre of Byzantine political and military life, historian and chronicler of buildings – whose hatred of the imperial family knew no bounds – Procopius of Caesarea, react to the building?

PROCOPIUS OF CAESAREA

The reign of Justinian & Theodora

> to me, and to most of us, these two never seemed like human beings, but rather some kind of avenging demons.
>
> – Procopius, *Secret History* 12.12

With these words Procopius – historian and assessor (legal advisor and secretary)[166] to Count Belisarius, Justinian's leading general – summed up his feelings about the emperor, Justinian, and the empress, Theodora. Procopius had an intimate knowledge of the court, both of its rivalries and strategies for the retention and expansion of power – and the vast amounts of wealth that these ambitions required and absorbed. On account of the mobility required by his role he also had first hand exposure to the consequences of these strategies. Born and educated in Palestine, he is described in the tenth century Byzantine lexicon, the *Suda*, as a 'rhetor and sophist';[167] in other words one well-schooled in the liberal arts who has undertaken advanced studies in rhetoric, philosophy and presumably, given his role, jurisprudence. Procopius accompanied Belisarius and the army on their various campaigns to restore the former borders of the Roman

Empire; those waged against against Sassanid Persia (527–532 CE), the Vandals in North Africa (533–534 CE) and the Ostrogoths in Italy (535–540 CE), which effectively bankrupted the empire and hastened its end. By 542 CE he was back in Constantinople where he was able to view the Hagia Sophia – completed and inaugurated in 537 CE, just a few years before – in its original form sixteen years before the earthquake-induced partial collapse and redesign of the great central dome in 558 CE. He also witnessed and reported – all too vividly – on the outbreak of the plague that decimated the city.[168] The outcome of these years was his authoritative *History of the Wars*, published around 550 CE, and sometime after this – possibly as late as 558 CE – his *On Buildings*, in which he recorded key facts about Justinian's building program. For our purposes, the importance of this text is that it commences with his ekphrases of the Hagia Sophia.

Ekphrases, hidden transcripts and countervailing narratives

Ekphrases – rhetorical descriptions of works of art – constituted a long-standing literary tradition evidenced as early as the eighth century BCE in Homer's description of Achilles' shield in the *Iliad*.[169] The *Imagines*, written in the third century CE by Philostratus the Elder, was the first complete work to concentrate solely on the description of artworks and so provided the literary model for the form. It would be a mistake, however, to read Procopius' *On Buildings* as merely a continuation of this tradition. Conventionally, the text is also read as a panegyric to the emperor Justinian – and indeed it appears to go to great lengths to praise his foresight, wisdom and god-like powers; but under conditions of absolute tyranny such expressions can also be carefully calibrated to mock, defame and otherwise undermine those in power and authority, though we will need to remain attentive to discern such subtle shifts of meaning in texts written for public consumption. Tyranny, naturally and inevitably, gives rise to its own

opposition, and that invariably takes the form of mockery of its moral pretensions, inevitable incompetence, favouritism and outright theft.

Procopius' ekphrasis of the Hagia Sophia[170] was composed within twenty years of the building's completion; it therefore represents a contemporary view of the structure from someone who shared the same educational and Hellenistic outlook as the designers.[171] Those parts dealing directly with the building provide a sensitive, rhetorically rich and even sensuous response to the play of light within the building's vast vault. Procopius' descriptive powers bring the structure alive in our imaginations in a unique and unforgettable way – which is exactly what ekphrases were meant to achieve; that said, there is more woven into the meaning of his text than appears at first sight.

We are principally concerned with Procopius' encoding of two additional strands of meaning that have been woven into the warp and weft of the text: firstly, a withering mockery of the emperor; and secondly, a change of interpretive lens whereby the edifice escapes the rhetoric of Christian piety to be reframed in the light of Hellenistic tradition. We can better illuminate what is at stake by considering a parallel work upon which Procopius was also engaged; a highly secretive text that could not be published without placing himself at risk of immediate execution; a text that is essential in order to grasp the deeper meaning of his ekphrasis of the Hagia Sophia; the notorious *Anekdota*, better known today as the *Secret History*. From the lines quoted at the beginning of this section, it is clear that Procopius loathed the Imperial household. In the *Secret History* he expresses – vents is perhaps a better word – his rage, withering contempt and disgust for the emperor, empress, Count Belisarius and his wife, Antonina, and all their works and doings. *On Buildings* needs to be read in close connection with the *Secret History* since the flattery and praise accorded to the emperor in the one is utterly reversed in the other. This fact warns us that we need to read carefully between the lines of his public texts in order to discern his real meaning, a dissenting voice, conveying a 'hidden transcript'[172] secreted within the apparently eulogistic script. The various

ways that Procopius developed to cope with these limitations are best illustrated by recourse to an example.[173]

As we previously noted, in 532 CE the aristocratic faction around Anicia Juliana, appears to have attempted a coup d'état whose public manifestation was the Nika Riots.[174] Procopius' account of the riots, in line with classical historiography, included placing a stirring speech in the mouth of the empress wherein Theodora, refusing to flee, supposedly proclaims that, 'royalty is a fitting burial sheet.'[175] Although on the surface this appears to be, and is commonly read as, yet another stylised eulogy, Procopius appears to have based his phrasing on a deliberate misquotation from Diodorus Siculus' first century BCE *Library of History* – a text that would have been known within his circle of Hellenists.[176] The passage in question contains words of warning to the tyrant Dionysius I of Syracuse when, faced with a revolt, he was advised that, 'Tyranny is a good burial sheet'[177] – in other words, continue in this way and you will end up dead. In these subtle ways, by embedding and twisting or reusing references from classical sources, Procopius was able to interlace a discreet, countervailing narrative within the body of a text that would be recognised by other educated Hellenists as a voice of dissent issuing from the very heart of the regime;[178] and a narrative that, through the recognition of its source and of the tradition it represented, would amuse, hearten and encourage those capable of reading between the lines. As we read Procopius' fulsome, indeed sycophantic, praise of the emperor in relation to the Hagia Sophia, we should bear in mind that, in the face of a totalising tyranny, belief becomes more not less stubborn; more not less determined to insinuate itself into discourse, and to do so in ways that will unify the opposition by mocking and seeking to undermine the prevailing power structure. In a second example, he pointedly praises the emperor for the 'wise' advice and guidance that he provided to the 'panicking' experts – the Hagia Sophia's expert designers – concerning the eastern load-bearing arch and the portion of the dome above it, which was cracking and in danger of collapse,

> It was not with money alone that the Emperor built, but with his mind and the other powers of his soul …. One of the arches … the one towards the east … suddenly began to crack, and seemed on the point of collapsing. Anthemius and Isidorus, terrified at what had happened, carried the matter to the Emperor, having no hope in their own technical skill. Straightaway the Emperor, impelled by I know not what, but I suppose by God (for he is not himself a master-builder), commanded them to carry the curve of this arch to its final completion. 'For when it rests upon itself,' he said, 'it will no longer need the props beneath it.' So the artisans carried out his instructions, and the whole arch then hung secure, sealing by experiment the truth of his idea.[179]

If you were to suspect that this elaborate staging was designed to set the emperor up for a fall – you would be right; nor, despite being translated, is it possible to ignore the humour implicit in the phrasing, 'impelled by I know not what.' Under conditions of tyranny, mockery becomes a staple, though discreet, form of discourse within the public domain. As Procopius and his readers would have been fully aware – and as Paul the Silentiary subsequently confirms – it was precisely this arch, and the part of the dome supported by it, that was the only part of the building to collapse in the aftermath of a series of earthquakes culminating in 558 CE. With this cautionary tale on reading Procopius in mind, let's move on to the second strand woven into his ekphrasis of the Hagia Sophia – the subtle reframing of the interpretive lens.

PROCOPIUS' EKPHRASIS OF THE HAGIA SOPHIA

Reframing the narrative

> Indeed one might say that its interior is not illuminated from without by the sun, but that the radiance comes into being within it, such an abundance of light bathes this shrine.
>
> – Procopius, *On Buildings* Book I.29

In his ekphrasis of the Hagia Sophia, Procopius describes how it was held as 'models' (*paradeigmata*) in the mind of the emperor, whose activity is described as like that of the demiurge, the creator deity in Plato's *Timaeus*.[180] These words directly echo those in the *Timaeus* wherein the creation of the universe is described in precisely these terms.[181] Since the *Timaeus* was one of the foundational texts in Hellenistic circles, Procopius could be fairly certain that an educated audience would immediately pick up his allusion.[182, 183] Procopius' words bear direct comparison with those of Plato taken from the *Timaeus*, 'when the artificer/ craftsman (*demiourgos*) of any object, in forming its shape and quality, keeps his gaze fixed on that which is uniform, using a model (*paradeigma*) of this kind, that object, executed in this way, must of necessity be beautiful.'[184]

Beyond this semi-public game, did Procopius have a more serious intent? Had some aspect of the architecture or decoration of the building suggested that the comparison of its construction with the account of creation in the *Timaeus* was in some way apposite? Significantly, Procopius remarks how the building's great dome 'does not appear to rest upon a solid foundation, but to cover the place beneath as though it were suspended from heaven by the fabled golden chain.'[185] And, further on, he reaffirms the metaphor by noting how the building appears to 'hang in mid-air.' We earlier encountered members of the school of Athens – principally Proclus and Marinus – describing their spiritual tradition as constituting a golden chain. You may recall that in his search for a worthy successor Proclus is quoted as saying that he was 'fearful that the truly Golden Chain of Plato might abandon our city of Athens.'[186] The expression, 'golden chain,' so easily overlooked, points beyond the eulogistic surface of Procopius' text to convey another order of significance altogether. We can readily identify two literary contexts in which this expression was employed. The first, and by far the better known, occurs in the *Iliad* wherein Zeus states,

> *If you let a great golden chain down from heaven;*
> *even though all you gods and goddesses lay hold of it;*
> *you can never drag Zeus down from sky to earth …*
> *but if I set my mind to it I could hoist all of you up*
> *along with the earth and the sea …*[187]

What, then, did Procopius' reference to a 'golden chain' symbolise? On one level this essay is a search for and restoration of the metaphysical context underlying his employment of this phrase. We can immediately highlight four possible interpretations that were historically associated with the metaphor. Firstly, the golden chain was read as a metaphor for the Hellenistic spiritual lineage manifesting through the *diadochi* – the members of that 'divine race,' the philosopher-theurgists of the school of Athens –

who incarnate in successive lives to facilitate the process of spiritual evolution. Their exemplary lives and spiritual achievements are set out in such works as Marinus' *Life of Proclus*, Damascius' *Life of Isidore* and Eunapius' *Lives of the Philosophers and Sophists*. Secondly, the golden chain could be read as a metaphor for the essential connectedness and ensoulment – the participation (*methexis*) – of all things which emanate (*prohodos*) from and ultimately return (*epistrophe*) to the source (the Platonic 'Good' or Plotinus' 'the One') all the way down to the basest elements of material reality. Thirdly, it can be interpreted as a justification for the practice of theurgy itself wherein divine beings, or deities, providentially intervene to 'lift' aspiring individuals to experience union with the divine (*henosis*). Fourthly, it may have been that Procopius was alluding to Orphic lore which expresses the closely related idea that all reality is united through sharing a common foundation. In one of the Orphic fragments discussed by Proclus, in his *Commentary on the Timaeus*,[188] Zeus asks Night how he can organise the world whilst preserving its unity,

> *How shall all things be one, yet each divine?*
> *And Night answered,*
> *Catch all in infinite aether round about,*
> *there in the sky, the boundless earth, the sea,*
> *and therein all the encircling signs of heaven.*
> *When you have strung a firm bond round them all,*
> *to the aether fasten a golden chain.*[189]

At this stage it is not important – or indeed possible – to isolate one particular interpretation as the 'right' one; but there is a real sense in which these uses are connected – they allude to that sense of spiritual connectivity and continuity that is an inherent feature of Hellenistic metaphysics. Whilst the decorative language of ekphrasis forms part of Procopius' literary style, nevertheless, his description of the building also provides us with a guide as to how the building could have been read from the

perspective of the, albeit guarded, symbolic language of an educated Hellenist. We can be fairly certain that this language and its underlying metaphysics was shared both by the designers as well as by the educated Hellenists who – albeit secretly – still dominated the civil service, the education system, and the professions generally. Another of Procopius' significant turns of phrase emerges in connection with his description of the curved line of columns beneath the building's smaller semi-domed areas or exedrae,

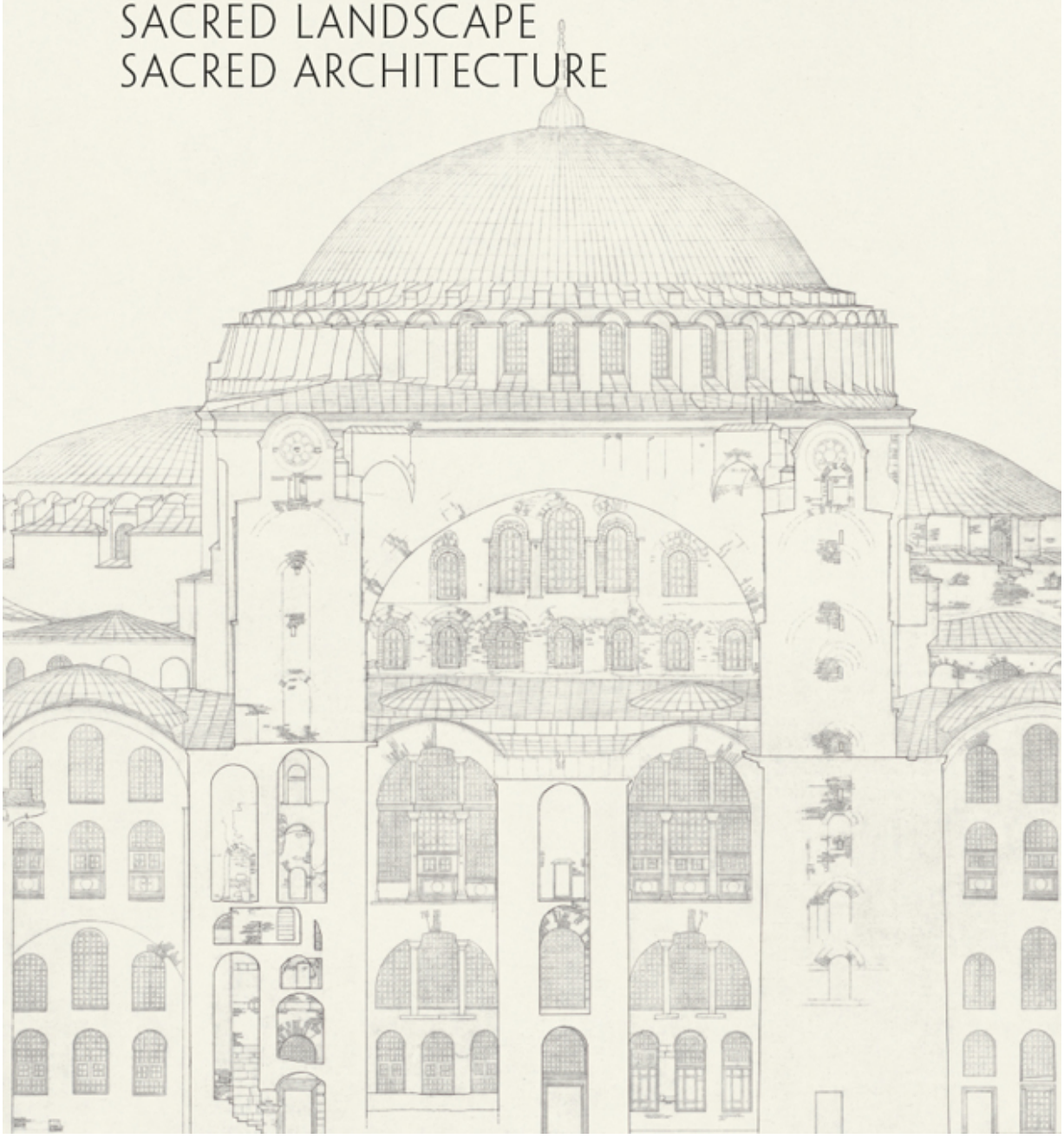
> the sanctuary 'is built up from the ground, not made in a straight line, but gradually curving inward on its flanks and receding (*hupochorousa*) at the middle.' Likewise, the columns in the exaedras 'do not stand in a straight line' – insists Procopius – 'but they retreat inward in the pattern of the semicircle (*hemikyklon*) as if they were yielding to one another in a choral dance (*en choro alleloís hupexistamenoi*).'[190]

The resonance of this comparison of the columns to a 'choral dance' or *chorós* can indeed be read in different ways; but it is clearly an opportunistic rhetorical flourish. The modest 'rows' of just two remote columns on the building's diagonal axes are as far removed from any idea of a choral dance as it is possible to imagine. As Procopius well knew, the choral dance was the form by which mystery initiations were conferred and by making this allusion he is able to intimate the idea that the architectural design is related to the culture of such initiations and their mysteries.

Taken together, these references are indicative of the ease with which the building's iconography could prompt the perception of a discreet, Hellenistic, countervailing narrative. Our question, therefore, is: Did the building's structural and decorative design actually embody such profound Hellenistic metaphysical and narrative features? In order to address this question we need develop a better grasp of the spiritual dimension or inscape of Hellenistic thought in relation to landscapes and architectural features by examining its language and key concepts.

II

SACRED LANDSCAPE
SACRED ARCHITECTURE



SACRED LANDSCAPE

> Every sacred space implies a hierophany, an irruption of the sacred that results in detaching a territory from the surrounding cosmic milieu and making it qualitatively different.
>
> – Mircea Eliade, *The Sacred and the Profane*

In the context of Western esotericism, most of the locations that fall under the rubric 'sacred landscapes' and 'sacred structures' date from well before the Renaissance; indeed, with the exception of the great cathedrals of the Middle Ages, they tend to be no later than the sixth century CE – the final century that enjoyed a broadly polytheistic Hellenistic culture, before the forcible imposition of an imperially sanctioned monotheism. Because of the temporal and cultural dislocation separating ourselves from the pre-monotheistic cultures of the past, when we seek to understand their perception of sacred landscape and the logic of the design of their sacred structures, we need to avail ourselves not of some generalised perceptions regarding the sacred, but specifically those peculiar to the culture and time that we are trying to make sense of. We need to proceed, in other words, through a form of comparative ethnography in order to seek entry to a

mindset, a lost and complex world of meanings. In this particular case we are concerned to articulate a set of concepts related to the perception of the sacred and how its relationship to reality was framed within the Hellenistic culture of late antiquity.

Our point of departure is the common perception that certain places gather to themselves an aura of heightened import, a concentration of feeling-tone that bestows a visceral intensity; an aura of inexplicable significance. This greatly heightened engagement foreshadows and accompanies ingress to a location's inscape, that excess of connotation over and above that induced by sentiment, reverie or survey. All such places fall, naturally and irrespective of any overt function, under the scope of the hierotopic[I] (a portmanteau formed by joining *hieros*/sacred and *topos*/place) that marks the near proximity of the numinous; that unfamiliar and intrusive ingress of the wholly 'other' as it intersects, and then passes through, the phenomenal plane. Whilst akin to an aesthetic response, the essential nature of this rarefied domain of feeling far exceeds considerations of pleasure or appreciation for nature's inherent beauty; or indeed, any other sensation engendered by the sublime, the awe invoked by the overwhelming scale and force attending nature's larger spectacles. It partakes, rather, of the nature of a sudden exhilaration at finding something that speaks – intimately and without mediation – to one's own spirit; that transcends the domesticated and the familiar; and which is resonant of a higher order of meaning. An order that may well be, entirely and at all points, at cross purposes with both established narratives and popular explanations.

Historically, hierotopic landscapes have been delineated and examined through a variety of lenses. They take the form of recurrent topographical features, such as distinctive rock formations – whether those of the Minoan peak sanctuaries or the deepest recesses of the painted caves of Lascaux and Trois-Frères; or abrupt breaks in geological stratification accompanied by the presence of springs, a defining characteristic of the many oracles of Apollo along the Aegean and Mediterranean coasts. Certain constellations are, putatively, thought to have been mirrored in the circle alignments and

decorative themes of Göbekli Tepe; whilst the winter solstice appears to have served as a nexus of metaphysical beliefs over the course of millennia, as evidenced in such diverse structures as the Newgrange passage tomb and the temple of Amun at Karnak.

Hierotopy does not need to be focused upon a specific feature, it can also be extended across an entire geographical region; the dowsing of 'energy' or 'ley lines' reveal invisible, intertwining and polarised arteries connecting sacred sites spanning entire continents; for example, the Apollo-St Michael Line unites Skellig Michael in the Irish Sea, with the scattered islands of the Aegean and beyond. Another pattern of hierotopias are founded upon cosmogonic representations of the dreamtime of creation – the sequence of landscape features that constitute the Australian 'dream tracks' that enact each region's creation myths.

Finally, and more relevantly for our theme, we need to consider such cojoined Hellenistic sacred sites as the urban temple, its rural sanctuary and the sacred processional way (*hiera odos*) which binds them to each other. Positioned in the countryside – *chôra* – on the margin of a state's territorial boundary, the sanctuary was connected to the city via its sacred way. Situated at a distance of some fifteen to twenty kilometres from the urban centre (roughly the equivalent of a day's processional walk) these mythically-imbued processional routes traversed an animated, indeed haunted, landscape interspersed with sacred locations. At certain springs, geological features, copses or burial grounds, specific classes of spirit – naiads, dryads, heroes, ancestral spirits – were placated or honoured through ritual dance and song, as were any significant sites of the presiding deity's myth cycle. We find evidence for such sacred processional routes throughout the Hellenistic world. The better known examples include Athens' sacred way, linking the city Eleusinion with the sanctuary of Eleusis; that between the Delphinion in Miletus leading to the temple of Apollo at Didyma; the sacred road of Ephesus, skirting Mount Pion to arrive at the temple of Artemis; and a sacred processional way connecting Stratonikeia with the temple of Karian Hecate.

As sacred spaces, sanctuaries and temples were deemed to be beyond the civic realm and therefore not bound by civic law, but rather by their own customs and regulations administered by hereditary priestly families. Within such sacred spaces another order of reality prevailed; votive offerings, left for the deity, became untouchable, whilst the status of *asylia* placed sanctuaries completely beyond the reach of civic law. Any criminal who could reach their gates and take the necessary oath would be granted the right to live, unmolested, within the site's sacred boundaries for life.

Whilst each of these examples denotes a specific form of sacred enactment, it is not unusual for such locations and structures to exist at or on the juncture of several of these hierotopic tropes. The temple of Apollo at Didyma is at the terminus of a sacred way; twinned in polarity with the nearby temple of Artemis and so indicative of a convergence of two polarised energy lines (named after Apollo and Artemis in Asia Minor); constructed directly above a geological fault; and possessed of a natural spring in its inner courtyard. Throughout this large, open air courtyard a tangible, unmistakable frisson persists to this day. Like Delphi, Didyma incorporated an ancient and revered oracle presided over by its own hereditary priesthood, the Branchidae (a non-Greek name derived from the pre-Greek Carian/Luwian cultural substratum), and the priestess of Artemis-Pythie.

We need to consider the further fact that such mythically-imbued places are not so much created as discovered or, better to say, revealed. Archetypal narratives attest to the role of the 'accidental' in their discovery, one in which numinous forces appear to play a guiding hand, so that unwitting actors stumble upon them and, in dream states, commune with or receive instructions from the spirits of place, leading to their incorporation within a community's sacred domain while being possessed of their own ritual traditions and processes. Even when situated on home ground, hierotopias exert an intensive presence all their own; at once enticing but also, as Actaeon discovered too late, fundamentally metamorphic. They demonstrate a quality akin to sentience; the visitor may experience themselves as an intrusive presence, an 'other,' feeling that they have

entered an otherworldly domain beyond the human. All of which raises the question, if fate leads one to such existential precipices, what constitutes a fitting mode of approach to and navigation of them? And what is a fitting mode-of-being within them? The hierotopic location, that meeting place between the sacred and profane worlds, has ever been the gateway to an otherworldly order, a portal in the midst of, but entangled with, the physical landscape.

Most of these considerations have been based upon a sacred landscape or combination of landscape and sacred structure; but our next step requires that we move beyond a vocabulary of the sacred predicated upon topography to one that articulates notions of the sacred that are congruent with both Hellenistic spiritual metaphysics and the realities of large-scale physical construction. With this in mind we will address a set of concepts that first arose at considerable time-depth, but were still current in the fifth century CE.

SACRED ARCHITECTURE

When old age shall this generation waste,
Thou shalt remain, in midst of other woe
Than ours, a friend to man, to whom thou say'st,
"Beauty is truth, truth beauty, – that is all
Ye know on earth, and all ye need to know."

– John Keats, *Ode on a Grecian Urn*

A sacred architecture that is not integral to, or an extension of, its landscape can only be the result of some culturally specific metaphysical outlook playing a dominant role in its structural realisation. In this context, the site chosen for the Hagia Sophia is removed from the city's ancient acropolis (dislocating any connection with its pre-Christian sacred sites and traditions); is adjacent to the imperial palace (having been commissioned to exalt the status of the emperor); and positioned on a site earlier occupied by another church of the same name (demonstrating the continuity of the faith under whose aegis it was erected). Furthermore, detailed research and 3D modelling undertaken beneath the building has revealed nothing but an extensive drainage system and the building's foundation works.[2]

There has been much discussion of 'sacred architecture' in terms of just a few key ratios and proportions, of which the Golden Section and Fibonacci number are the unvarying ingredients. Both the historicity and relevance of these ideas to sacred architecture (and indeed, to the natural world) has been seriously challenged;[3] so I will pass over these concepts as they appear to be inessential to, and possibly misleading in connection with, our understanding of sacred buildings in antiquity. In addition, merely counting features, such as the number of columns or the numbers of columns of a specific material, and then seeking to extrapolate sacred significance from the resulting numbers is, similarly, a dubious undertaking. Columns are critical structural elements and, in lieu of understanding their role in supporting the stresses arising from basic features of the design, abstract numerical speculation is bound to be perceived as ungrounded, which is not the same thing as saying that it is wrong!

Under conditions of isolation from a myth-imbued landscape or archaic tradition, a 'sacred architecture' is not a self-evident thing-in-itself; it can only be the outcome of the implementation of a well-attested metaphysical system via an abstract geometry and/or decorative scheme. Although stereometry, the mathematics of three-dimensional objects, had been developed by the fourth century BCE, architects could not utilise constants such as Pi (π) in formulae for calculating curved surfaces, or the square root (√) in order to calculate the length of diagonals, since their use generates irrational numbers for which Greek lacks expression. They therefore had to rely upon a system of approximate values,

> the engineers of antiquity worked principally along a system of rational numbers and approximation values. These often even conflicted with the exact geometry of Euclid's teachings.[4]

Even so, without a practical method for calculating the loads that a large structure, such as a dome, would place on its supporting members, both vertically and horizontally, the viability of the entire structure would need

to rest, ultimately, upon sound experience and good judgement to render the construction safe. Practical difficulties also arose when attempting to translate precise geometries to the average building site: uneven ground, sub-surface works and partially built structures obscured by scaffolding, braces and lifting devices; and the floor area, inside and around, littered with mounds of mortar, brick, stone and timber. The point here is not that architectures expressive of spiritual ideals do not exist, but rather that we need to take account of the limits imposed by the materials used, their sizes and weights and the means, mathematical as well as mechanical, available for their manipulation. The massive, centuries-long shifting of the entire bulk of the Hagia Sophia – some due to internal stresses, others induced by seismic activity – underline just how provisional a structure can remain even centuries after its completion. The point, then, is that for there to be a sacred architecture in antiquity there needs to be a feasible design concept upon which it rests; and this means a design that follows, or incorporates, traditional forms, for with tradition comes the know-how and experience necessary to execute it. The Hagia Sophia combines both tradition and innovation, though not in equal measure. The one, predictable, sure of itself and what it can achieve; the other, risky, provisional and in need of constant intervention and improvisation.

In terms of tradition, the building combines two established architectural forms: the basilica – a standard form derived from Roman civic architecture and long adapted to provide the basic architectural form of a church; and the domed centre-plan type of building in which the dome rests upon a circular or hexagonal base. The Hagia Sophia combines features of both these designs but then rests the dome – measuring some 32 metres across – on a shallow drum that aligns itself seamlessly with the verticality of the building through innovative architectural structures known as pendentives. The building's pendentives act to convert its square base into a circle and so provide a smooth transition from the ground up to the vast, reflective mirror that served as the building's original dome. The dome is abutted by a cascade of half domes that served to lengthen the square at the base of the dome to create the building's longitudinal axis.

The resulting, unobstructed volume of the vault, at some 255,800 cubic metres (the largest vault ever constructed and one that remained so for the next thousand years) was central to the sculpting of those great intangibles – sound and light – that were integral to the expression of the building's underlying metaphysics. What distinguished this building as a work of sacred architecture was neither its location nor the use to which it would be put, but its metaphysical underpinnings. We can think about its metaphysics under three related headings: proportionality, evolution of form, and the sculpting of the intangibles, of light and sound.

Dealing with proportionality first, we note that the most proximate source for these ideas was the *Timaeus*, and the extensive commentaries thereon by such luminaries as Proclus. In the *Timaeus* Plato states,

> So now we find that the power of the good has taken refuge in the nature of the beautiful. For measure and symmetry (*summetria*) everywhere, I imagine, are beauty and virtue.[5]

Rather than use the word 'symmetry,' however, we note that,

> The Greek noun *summetria*, and the associated adjective *summetros*, both of which are used quite frequently by Plato in the *Timaeus*, mean literally 'the same measure' or 'of the same measure.'[6]

Hence 'proportionality' provides a far more suitable translation than the modern 'symmetry'; one that better retains the sense of the original idea. As we saw, Timaeus, a Pythagorean, provides an account of the creation of the Kosmos in terms of mathematical, geometrical and harmonic proportion. In this system, the emergence of chaotic elements from an ineffable Source leads to their organisation, by the demiurge, in terms of their *summetria*, their proportionality to one another as they gain in increasing levels of complexity, thereby allowing them to maintain their metaphysical connectivity to their origin. Proportionality, then, becomes

not just a semeion, a semantic marker of the presence of the sacred, but instantiates it and makes it actually present – an insight vividly conveyed by John Keats in the lines at the head of this section, lines that echo Plato's insight. It is the fact of applying proportionality to the building's complex, evolving forms that give it its unique psycho-energetic 'fingerprint.'

Within the Hagia Sophia (following the measure adopted for the design of the rival church, Hagios Polyeuktos) proportionality, as applied to both the plan and elevation of the building, is keyed to that most ancient system of measurement, the Egyptian royal cubit. The use of this measure is attested from the period of the Old Kingdom (circa 2,700 BCE) throughout the religious buildings of Egypt and by the later New Kingdom religious structures as well as the surviving cubit rods.[7] These benchmark measuring devices utilised 7 palms of 4 digits each, totalling 28 parts, which give a total length of about 52.5 cm.[8] That this was the unit selected for the building, rather than an indigenous Greek or Roman unit, is indicative not only of a desire to 'outdo' the Hagios Polyeuktos; but is further evidence of the respect accorded to all things Egyptian when the subject matter is related to deep history, religion or spirituality. We have seen this in the 'Egyptian' discourse not only of Plato's *Timaeus*, but in the Egyptian style adopted for the discourse between Porphyry and Iamblichus in *On the Mysteries*.

Moving on to our second heading, the evolution of form; when we consider the building from a top-down perspective, we can derive the following evolving pattern of architectural forms: the point or centre of the dome, the dome instantiates the circle, the circle is balanced on the top of a series of triangles, known architecturally as pendentives, which are in turn supported by a series of arches, which represent the form of the semicircle, and rest upon the tops of the piers arising from the square base. It is important to note that in deriving this more complex series of forms one from another, each subsequent form continues to retain the relationship of proportionality with that which both precedes and follows on from it. The entire structural design of the central core of the building therefore resembles, though from a Proclean, rather than strictly Platonic, perspective,[9] the style of the process of creation outlined in the *Timaeus*,

> in looking at the plan of St Sophia … it is almost as if we see, translated in stereometry, the geometry of the divine as interpreted by Proclus in his commentary on Euclid.[10]

Our third heading concerned the sculpting of the intangible qualities of light and sound. We will return, in due course, to explore how this sculpting was achieved when we come to consider the building's structural design. For now, we need to more fully assimilate the vocabulary of the sacred as it was articulated within Hellenistic tradition; a tradition rooted, at its core, in Orphic and Pythagorean metaphysics and giving rise to a series of terms that we can now explore before turning to their practical application within the building itself.

CHÔRA / CHORÓS

Performance and participation

Chôra

In considering sacred space, we are challenged from the outset by cultural constraints imposed upon our sensibility: how do we constitute 'space' as a meaningful category? We can only explore the hierotopic by moving along the continuously shifting, contested line between thought and that abyss of reason – our receptive, intuitive rather than discursive, modes of awareness. In fact, such receptive states possess an unusual and unexpected genealogy. In Plato's *Timaeus* we encounter his use of a familiar term – *chôra* (the land outside the *polis* or city state) – now radically redefined as a receptacle (*hupodochê*) devoid of any qualities whatsoever; but which is, nevertheless, both matrix and genetrix, the immediate source from which the demiurge draws all of the forms with which to furnish reality,

> everlasting, not admitting destruction, granting a seat to all generated things, apprehended without sensation by a sort of bastard thinking, scarcely believable; we look at it indeed in a kind of dream and affirm that everything that exists must be some place (*topos*) and occupy some

> *chôra* and that that which is neither on earth nor anywhere in heaven is nothing.[11]

How are we to interpret this oblique diction? And how are we to understand its subject – the transparent, colourless, shapeless receptacle that stands at the very heart of the demiurgic process? Proclus developed the concept to characterise the state of awareness necessary to enact theurgical union, referring to it, in words that echo Plato's, as 'the bastard intellect' (*nothos nous*). The theurgist sedulously cultivates their sensibility, perfecting a mode of egress from their habitual, dualistic awareness to stabilise a higher-order, non-discursive, unitary state of being-in-itself; that is union with the divine, sharing the co-creative space of the 'first time,' the Platonic *chôra*, the absolute degree of being. In his interpretation of Plato's *chôra*, Proclus found support in one of the fundamental performative texts of the school of Athens, the Chaldean Oracles. Therein we find instructions for attaining the disposition necessary for theurgical union, though the divine is described, somewhat ambiguously, as 'a certain Intelligible.'

> There exists a certain Intelligible which you must perceive with the flower of mind. But if you turn your mind to it and perceive it as perceiving a specific thing, you will not perceive it. … You must not perceive that Intelligible with vehement effort but with the extended flame of an outstretched mind that measures all things except that Intelligible. You must not perceive it intently but – bringing back the sacred eye of your soul – extend an empty mind (*keneon nous*) into that Intelligible to know it, for it exists outside your mind.[12]

Together, 'an empty mind,' the 'flower of the mind,' the 'extended flame of an outstretched mind' (or, indeed, the 'bastard intellect') encompassed the continuing evolution of the Platonic *chôra* from metaphysical exegesis to a phenomenology of theurgical participation; and thereby articulated a new

vocabulary of space and spatiality – a language fit for the articulation of the sacred whether encountered in a landscape or, more relevantly, an architectural structure.

Chorós

> there is a sense of movement contained in the Greek word *chôra*, which is linked to the verb *chôréô* having two senses: … it means to withdraw … also to go forward, to be in motion or in flux … in both cases having the effect to 'make room for,' generating a particular kind of space.
>
> – Nicoletta Isar[13]

We earlier noted how progress through the mythically-imbued landscape of the physical *chôra* – the sacred way – was charted via a liturgical protocol of devotions and appeasements that honoured the spirits of place. As we also noted, the form that these rituals took was that of dance, though more specifically, choral dance, *chorós* (a homonymic of *chôra*). *Chorós* denotes collective action of which sacred dance, and more specifically *kyklíos chorós*, or circular dance about an altar, was paradigmatic; and *astron chorós*, the 'dance of the stars,' was its imaginal twin. Along with the presence of a hereditary lineage-holder, sacred dance provided the performative vehicle for theurgy – god work – in all its forms; but, more specifically, for the conduct of the mysteries; the art of inducing divine possession (*enthousiasmós*) that is the hallmark of entering the spiritual *chôra* – a state of non-duality. In his encomium, *De saltatione*, Lucian of Samosata states,

> Among the ancient mysteries not one is to be found that does not include dancing … persons who engage in the mysteries are popularly spoken of as 'dancing them out.'[14]

The point of the *chorós* was the creation of a shared ritual space, a receptacle (*hupodochê*), an energised *chôra* wherein the ritualists were absorbed in a state of non-duality, of unity with the hidden god. Through this conceptualisation of ritual dance, of *chorós*, and of the cosmogonic and phenomenological space of ritual, *chôra*, we derive the twin signifiers of an esoteric spatiality.

We have already seen that Procopius used this idea to describe the appearance of the four groups of two columns arrayed diagonally in each of the conches (the small, semicircular recesses crowned by a semi-dome, positioned at the four corners of the naos – the central area of the building). Now whilst ekphrases are imaginative and poetically evocative descriptions of a work of art or architectural structure, it is straining the resources of even that overly rich language to ask us to imagine that the columns appear 'as if they were yielding to one another in a choral dance (*en chorô allêloís hupexistámenoi*).'[15] This level of hyperbole appears to have moved beyond the realm of the descriptive to incorporate yet another countervailing narrative: a reference to the forbidden Hellenistic tradition of mystery initiation, the generation of the ritual crux or space, the Platonic *chôra*.

SUMBOLA AND SUNTHEMATA

The metaphysics of participation

As we proceed, we need to avoid falling back into assuming that issues relating to materiality only involve functional, symbolic or aesthetic considerations. Whilst all of these categories are undoubtedly implicated in our perceptions of landscapes and architectural structures, we yet need two further categories to even begin encompassing the full breadth of antique thought. Specifically, we need to take account of the ancient concepts of *sumbola* and *sunthemata*, and of the priority accorded to them, as critical elements affecting the range of meanings accorded to manifest forms – their proportionality, ratio between parts, quality of luminescence and depth of harmonic resonance – and hence to the iconology of sacred structures.

In this worldview, all forms of matter – including such insubstantial forms as light – possess their own specific 'inscape'; that's to say, their own specific relationship with the higher order realities – the 'intelligible' and 'intellective' worlds beyond the sensible (or material) world – from which they evolved and upon which they continue to depend, as though those higher dimensions are infolded or nested co-existently within the coarser, more manifest levels of reality. Since all matter was excavated, so to speak,

from the originary matrix of the Platonic *chôra*, all matter retains its essential participation (*methexis*) through all of the subsequent processes of evolutionary complexity. This being the case, there is no dead matter and nor, within this tradition (in contradistinction to Plotinus) is matter ever evil,[16]

> Thus, all things are full of gods: Things on earth are full of heavenly gods; things in heaven are full of supercelestials; and each chain continues abounding up to its final members. For what is in the One-before-all makes its appearance in all …[17]

This hidden life, this inscape of denser materials, the outcome of an occluded metaphysical genealogy and continued participation in the 'intelligible world,' is the essence of the concept of *sunthemata*. It is by virtue of *sunthemata* that the theurgist is able to organise denser forms possessed of a shared higher order provenance into an assemblage. Such assemblages, known anciently as *sumbola*, can then be used to increase the frequency of objects in the mundane world through their improved alignment with the much higher frequency *energeia* of higher orders of being; and so enable them to exert a greatly amplified influence on the environment around them. The prime exemplar of these types of association is provided by Proclus in his *On the Hieratic Art*,

> the ancient wise men brought divine powers into the region of mortals, attracting them through likeness. For likeness is sufficient to join beings to one another. If, for example, one first heats up a wick and then holds it under the light of a lamp not far from the flame, he will see it lighted though it be untouched by the flame, and the lighting proceeds upward from below. By analogy, then, understand the preparatory heating as like the sympathy of lower things for those above; the bringing-near and the proper placement as like the use made in the priestly art of material things, at the right moment and in the appropriate manner; the

communication of the fire as like the coming of the divine light to what is capable of sharing it; and the lighting as like the divinization of mortal entities and the illumination of what is implicated in matter, which things then are moved toward the others above insofar as they share in the divine seed. like the light of the wick when it is lit.[18]

ACHEIROPOIETA

The poetics of participation

> Either they are images believed to have been made by hands other than those of ordinary mortals or else they are claimed to be mechanical, though miraculous, impressions of the original.
>
> – Ernst Kitzinger, *The Cult of Images in the Age before Iconoclasm*

Overlapping these metaphysical operations we encounter the concept of *acheiropoieta* – 'images not made by human hands.' Unlike either *sumbola*, which are assemblages, or *sunthemata*, which are energies occulted deep within metaphysical, rather than physical, space, *acheiropoieta* are the visible signs left by the demiurge or daemonic beings on physical forms. Quite distinct from their modern psychological counterpart, pareidolia, *acheiropoieta* are images generated during the demiurgic process of creation as the fluid forms are extracted from the *chôra* and shaped to form new realities. *Acheiropoieta* is an ontological factor that needs to be taken account of as an integral part of Byzantine visual culture, the Byzantine perceptual framework, and goes some way to clarifying the intellectual distance that

the modern mind must traverse in order to appreciate the meaning accorded to images impressed upon the objects at the time of their creation.

ENARGEIA

The phenomenology of participation

hard are the gods to look upon when they appear in manifest presence.
– Homer, *Iliad.*

Heidegger bids us recall a scene in Homer's *Odyssey* wherein the goddess Athena appears to Odysseus and Telemachus as a beautiful young woman; Telemachus, however, is not able to recognise her because 'the gods do not appear to everyone in all their *enargeia*.'[19] The root of *enargeia* – *argos* – denotes a particular kind of luminescence, a certain quality of conspicuousness, 'What gleams, shines forth … presences forth from itself … Odysseus and Telemachus see the same woman. But Odysseus perceives the presencing of the goddess.'[20]

An epiphany of the gods is never a simple event; *theos* does not signify an identity but rather that quality of presence – that *enargeia* – the halo that surrounds an event or a person, as in possession (*enthousiasmós*), to be infused with the impenetrable obscurity, the darkness of the 'other.' But in certain cultic contexts – ritually mediated processes such as the mysteries or the performance of theurgy – the occurrence of an epiphany is

paradigmatic to the form – it is both the objective and its anticipated outcome; one that is, phenomenologically, clear and distinct to the participants; the signatural imprint of a valid initiatory lineage engaged in the performance of ageless rites in the traditional way. In a well-known passage Iamblichus states,

> Intellectual understanding does not connect theurgists with divine beings, for what would prevent those who philosophize theoretically from having theurgic union with the Gods? … rather it is the perfect accomplishment of ineffable acts religiously performed and beyond all understanding … the power of ineffable symbols comprehended by the Gods alone that establishes theurgical union.[21]

We cannot, so to speak, deconstruct such events and grasp their essential truth – the *explicatum* – without incurring a substantial and fundamental loss of sense, of both meaning and of significance. The play of light within the vast vault, its concentration and diffusion through the medium of a thirty-two metre diameter reflective surface whose individual elements – gold tesserae – were each individually angled to cast a dazzling luminescence into the central vault, a luminescence that also laced the galleries with intense shadows. The decision to make light the building's principal thematic element follows from the most archaic Hellenistic metaphysics, 'Light … is not only a conspicuous *semeion* of divine presence … it is inextricably intertwined with divine epiphany; it lies at the very heart of the notion.'[22]

To consider this theme from the most abstract, metaphysical vantage point that we can attain – one that is, as we saw, entirely consistent with the designer's spiritual background – we would need to turn to the Orphic literature that provided the ultimate spiritual bedrock of Hellenistic metaphysical tradition; therein we find that, before manifestation, the great serpent, Heracles/Kronos, and Nyx, the primordial mother of darkness, generated an egg which burst asunder to reveal the primal Orphic deity,

Phanes. This bi-gendered god whose name means ‘to bring to light’ or to ‘make appear’ (from the Greek verbs *phanaô* and *phaínô*) was known by many names but through one essential quality, a pure and unremitting luminescence. If light is fundamental then so too is his father, who, as Kronos, is the deity most concerned with time.

TIME AND TIMING

Astronomy and astrology

We can identify two further elements that certainly need to be considered in relation to sacred architecture in antiquity, but which possibly still obtain well beyond the fifteenth century: firstly, the overall orientation of the building with respect to the solstices; and, secondly, the relationship between the nature and quality of the planetary and astral alignments obtaining at key points in the construction process.

We earlier noted how the training of *mechanikos*, the elite class of scientist mathematicians who took responsibility for the most complex engineering projects, combined their scientific studies with such liberal studies as music, philosophy and astronomy. Astronomy was almost certainly used to calculate the orientation of buildings, the Hagia Sophia being precisely oriented towards the winter solstice;[23] as we will demonstrate in due course, this fact has far reaching consequences in terms of its metaphysical implications. Whilst in antiquity the terms 'astronomy' and 'astrology' were often used interchangeably,[24] and whilst some, but not all, astronomers also practiced astrology, astrologers were not, necessarily, astronomers.

In the context of the designers of the Hagia Sophia, we saw that their educational tradition descended back to Eutocius of Ascalon and to Ammonius Saccas of Alexandria, one of the leading Hellenistic philosophers of the age, who Damascius described as one of the outstanding geometers and astronomers of that or any other era.[25] Realistically, their formal training would have encompassed such key texts as the *Timaeus*, which established the metaphysical rationale for the connection between the celestial and material worlds. As we previously noted, according to the *Timaeus*, the demiurge ensouled two bands: an outer circle, of the 'identical/same,' that became the sphere of the fixed stars; and an inner circle, of the 'different,' that was then divided into seven smaller circles to create the spheres of the seven planets.[26] This incorporation of the periodicities of the celestial world served to underline their signatural importance for understanding the deeper patterns affecting our daily life, and therefore of the utility of astrology for leveraging those insights. For in that age, and for many centuries after, the use of astrology was normalised and employed, often on a daily basis, to determine – or elect – the most and least opportune days and times for any significant activity. All major events therefore warranted the drawing of an electional chart to determine the optimal days and hours upon which to commence them. A large scale, politically sensitive and prestigious project, such as that represented by the Hagia Sophia, certainly required the determination of favourable days and hours. I would suggest that, on the basis of a rational, phased structuring of the construction process, each phase would justify an elective chart in order to ensure a harmonious and successful outcome; but also, perhaps, to provide an opportunity to ritually imbue each phase of the structure with the positive astral and planetary energies then active. Based upon the known date upon which construction of the Hagia Sophia commenced, the corresponding electional chart has been composed using the historical principles of Hellenistic astrology. Given the haste that the emperor imposed upon the project, the elective date should also be the most proximate, rather than simply the most optimal, date for such major operations to commence. The results derived from the newly calculated

electional chart for the commencement of construction of the building clearly indicate a positive concentration and concatenation of significant astrological alignments, conclusively demonstrating that the chosen date had been selected using elective astrology. The elective reading for the commencement of construction of the building appears as Appendix I.

III

THE IMMATERIALITY OF STONE

THE IMMATERIALITY OF STONE · I

The structural design

> for geometry is the knowledge of the eternally existent … it would tend to draw the soul to truth, and would be productive of a philosophic attitude of mind, directing upward the faculties that are now wrongly turned earthward.
>
> – Plato, *Republic* 527b

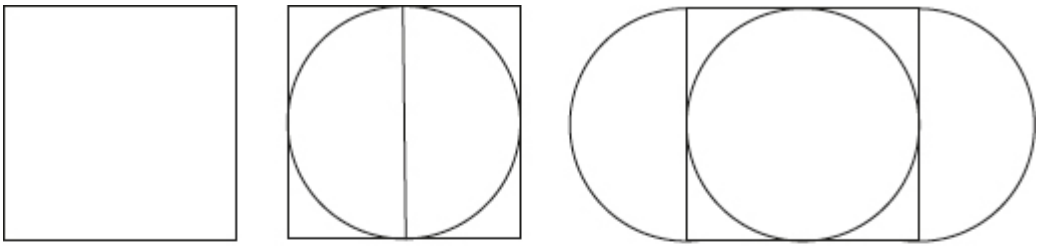
There is an irreducibly sensual aspect to the contemplation of geometric and architectural form, our aesthetic responses acting as an unconscious sensor of the fact that beneath the complexity of planes and angles there lies a hidden order. Such a response is perhaps best described as the instinctive perception of proportionality within a complex assemblage; an acquiescence or trust in the fact that a deeper order inheres despite the overwhelmed testimony of our immediate senses, confused by the scale and scope of the structure, its variegated surfaces and the density of light, shadow and sound that these invoke.

In the *Timaeus*, proportionality is the driver of creation. In its first form, soul-stuff is a bland, uniform mix of the Same, the Other and Being;[1] as such it is inert, lacking in dynamism and therefore incapable of instigating change, evolution or movement until it is infused with the motive force of proportionality, a force that breaks the spell, the hold of stasis, and frees it to mutate, taking on ever greater levels of complexity whilst it remains, nevertheless, still rooted in, and therefore participative of, its originary nature.[2]

When we come to contemplate the geometrical and architectural form of the Hagia Sophia, we are in the presence of a complex geometrical and architectural assemblage which is, nevertheless, redolent of some deeper proportionality. As has been demonstrated,[3] if we take the most basic element of the building's foundational geometry to be a square (a natural assumption, since a square lies precisely in the space suggested by the inset of the building's four main piers; a position that will place it immediately beneath the dome, and therefore in a position to allow its dimensions to directly affect the fundamental geometry of the entire structure), we can then proceed to use the side of this square to generate a range of geometric shapes – the circle, the square of the diagonal, the semi-circle and triangle – all of which will remain proportionally keyed to either the side or diagonal of the basic square. In consequence of the fixed dimensions of the side of that square, the dimensions of all of the proportionally related three dimensional (stereometrical) elements derived from these shapes will remain keyed to this one dimension. I suggest that the basic unit driving all of the subsequent design and construction is the royal cubit, the most ancient system of measurement utilised for religious architecture, attested as early as the Egyptian Old Kingdom (the third millennium BCE). The side of the building's central square, from which all of the building's other vectors are derived, is, at some 31 metres,[4] approximately 60 royal cubits (assuming 0.525 metres per cubit).[5] You may recall that we also saw this

ancient system of measurement employed in Anicia Juliana's Hagios Polyeuktos.[6]

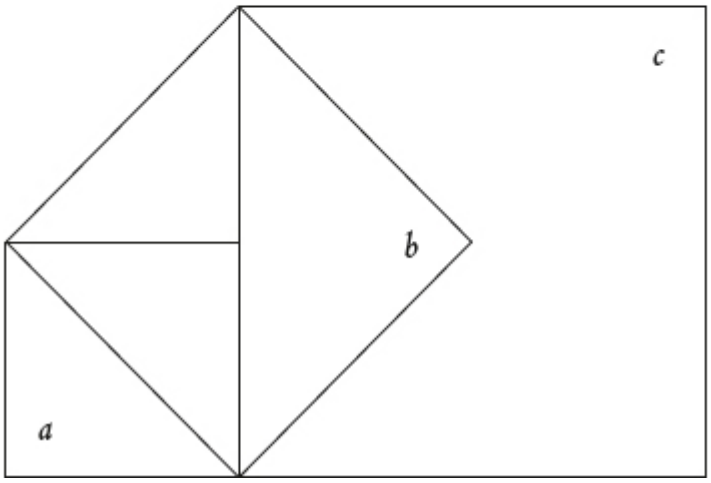
The following sequence of simple geometrical shapes, starting from a square and progressing to a circle and semi-circles, provides the essential geometrical elements of the building's plan whilst laying the foundation for the elevation.



Square

Square + circle + 2 semi-circles + 4 spherical triangles

The semi-circles move to the edge of the square and 5 smaller circles



Taking the diagonal of our original square (*a*), we can project a second square (*b*) using the diagonal as its base, and further repeat this process using the diagonal of the second square (*b*) to create a third (*c*) which provides an approximation to the area of the building's interior dimensions (less the inner and outer narthex), as illustrated above. By generating the

dimensions in this way, we can be sure that the entire structure's proportionality is maintained throughout.

When these basic shapes are placed on top of a precise architectural drawing of the actual floor plan, they illustrate the convergence of geometrical proportion with its physical actualisation (fig.1).

This basic set of dimensionally related shapes can also be viewed in elevation, though reconstruction of the original proportions is made problematic by the redesign and rebuilding of the dome after its partial collapse in 558 CE.[7] This same proportionally related geometry can now be used to generate the building's more complex stereometry (three-dimensional forms): the cube, semisphere and spherical segment (pendentive), whose assemblage in sequence precisely delineates the central architecture of the building. This progressive unfolding of complexity nevertheless retains the design's original geometrical proportionality amongst all of its evolving members. It is precisely this proportionality – cloaked in carefully chosen surface coverings of varying hues and reflectivity; interspersed with columns that break up the light reflected from the dome and half-domes, and further amplified by the serried ranks of windows set into the tympana – that creates the rich interleaving of the architectural massif, with its signature proportionality, and combines it with the rich sensorium of variegated surface colours and textures, intensities of light, shadow and sound. Exposure to this larger than life, immersive surfeit of multisensory aesthesis serves to overawe our self-awareness, drawing our attention upwards and outwards, remoulding our perception with the expansive imprimatur of a vastly larger, more integrated and harmonious sense of personhood. It is precisely this phenomenological affect that we seek to indicate by the expression 'the immateriality of stone,' that dissolution of the 'sensible' world of everyday reality in the metaphysical world of pure Platonic forms and through them, the formless, intelligible world of pure being. Plato's *Timaeus* establishes the fundamental linkages between form, appearance and this higher, intelligible, order.[8] In his

commentary upon this visionary tradition, Proclus writes how the soul seeks, 'to become one with what she sees and enfold their plurality, to behold the secret and ineffable figures in the inaccessible places and shrines of the gods, to uncover the unadorned divine beauty and see the circle more partless than any centre, the triangle without extension, and every other object of knowledge that has regained unity.'[9]

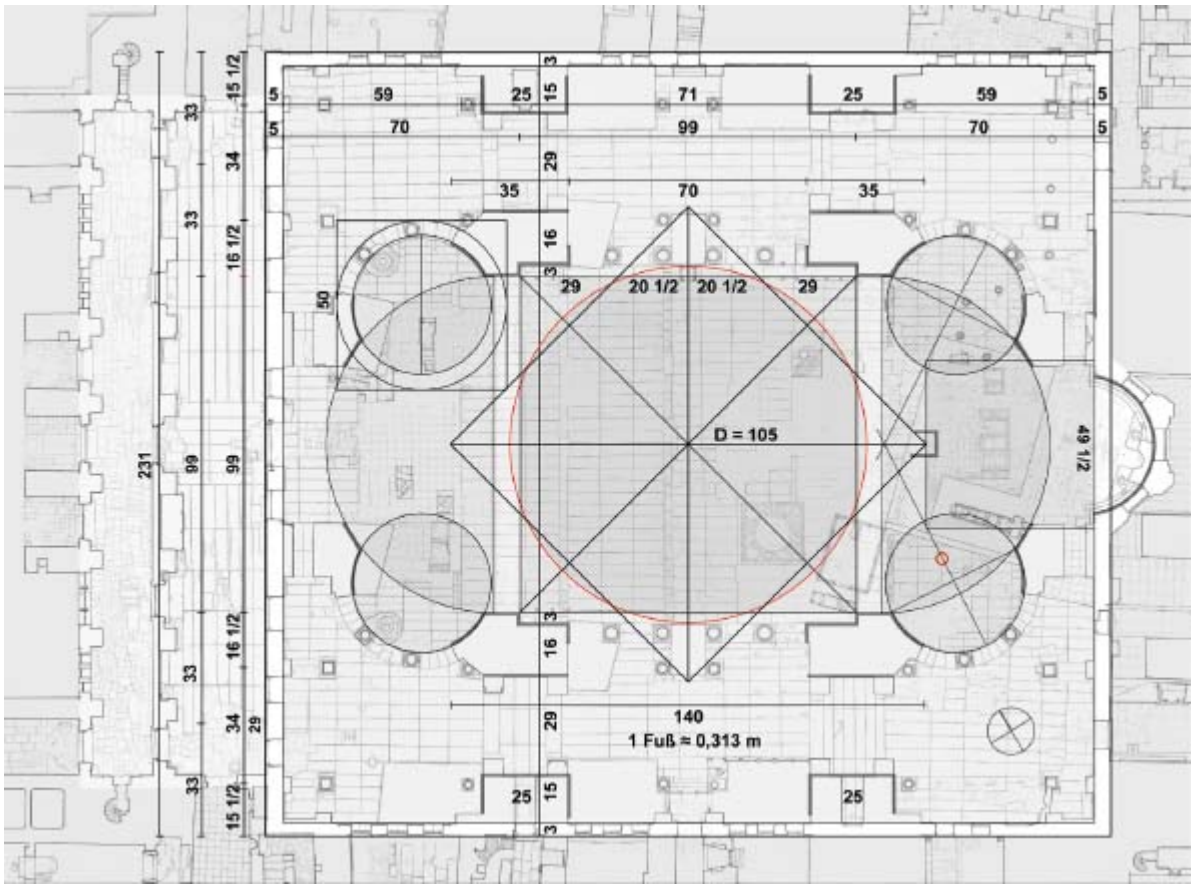
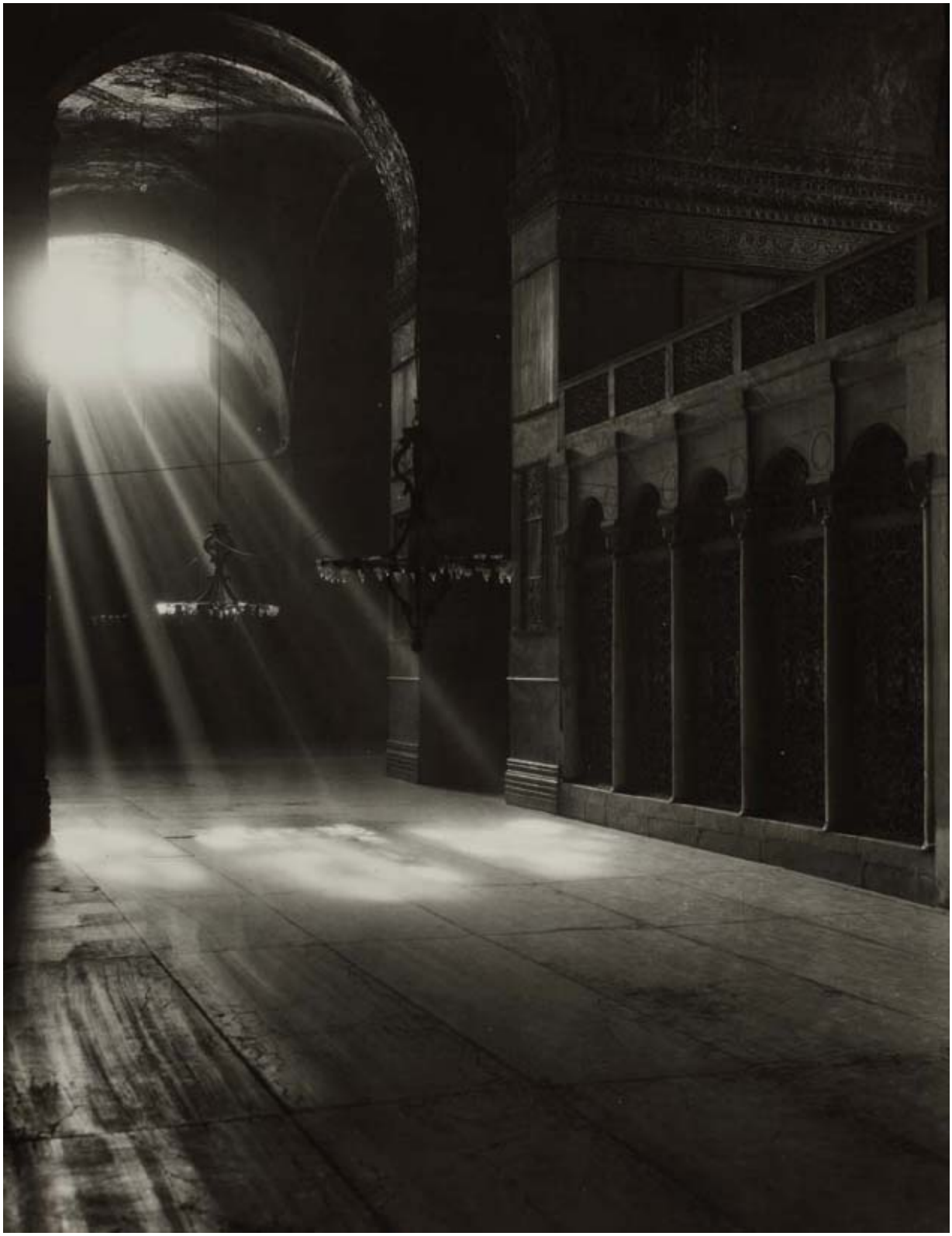


figure 1 Reconstruction of the basic geometry of the architectural plan keyed to the side of the central square and based upon the building's actual dimensions. The geometric shapes have been superimposed on the highly accurate, detailed architectural drawing of the plan of the Hagia Sophia by Robert L. Van Nice (with thanks to Helge Svenshon for this diagram).



The physical architecture

The corners of a square defined the placement of four large stone piers secured directly into the bedrock and rising some 22 metres. The piers were then spanned by four connecting arches, the gaps above and between the arches being filled by large three-dimensional triangular shapes, called pendentives, the geometric segments of a sphere. As far as we can establish, this is the first, and certainly the largest scale utilisation of this innovative design. The line of the original dome appears to have followed the curvature of the pendentives -as though they were all part of the same sphere. Procopius, who had returned to Constantinople in 542 CE, would have had ample opportunity to view the original dome (before its partial collapse in 558 CE,[10] due to a series of earthquakes) and described its design in the following terms,

> The upper part of this structure ends in the fourth part of a sphere, and above it another crescent-shaped structure rises, fitted to the adjoining parts of the building, marvelous in its grace, but by reason of the seeming insecurity of its composition altogether terrifying. For it seems somehow to float in the air on no firm basis, but to be poised aloft to the peril of those inside it.[11]

The pendentives serve to convert the basal square into a circle by filling the gaps between each adjoining arch. The present consensus is that the original dome was much shallower, a segment of a sphere rather than a hemisphere. Due to this shape, its compressive qualities would have greatly augmented its tensile strength[12] and afforded the possibility of constructing it without the use of ribbed vaulting; in which case it would have possessed a much shallower, smoother under-surface to serve as the base upon which an effective reflective surface could be constructed. Whatever the actual pitch of the original dome, and whether or not it was executed using ribbed vaulting – a subject of continued speculation[13] – it played a key role in the

articulation of the designers' overall thematic conception. The dome rested on a shallow drum punctuated by a series of embrasures that would have been covered – based upon the present design – with silvered tesserae so that they reflected sunlight up onto the dome's surface (see Appendix II for a technical description of the optics based upon Anthemius' work on reflective surfaces). We will consider the significance of the dome's reflective design in more detail when we come to consider the building's all important decorative scheme in the next section; for now, however, we simply note that the dome was executed in this shallow, risky fashion in order to fulfill a fundamental aspect of the building's aesthetic and thematic design.

The shallowness of the dome, combined with its enormous weight, exerted massive lateral as well as downward forces. Whereas the downward forces could be safely channelled through the four supporting piers anchored in the bedrock, the lateral forces were less easy to manage, and ultimately proved to be too unstable given the highly active seismic nature of the region. On the longitudinal axis the load was displaced through the cascade of semi-domes that creates the building's longitudinal, 'basilican' axis terminating, on both ends in either two (at the entrance) or three (where the altar stands) exedrae (small, domed recesses). On the transverse axis, the lateral thrust of the dome has been mitigated by the construction of tower-like buttresses on the exterior of the building that align with the internal piers.

The great advantage of the design is that the tympana (the areas under the transverse arches stretching from the apex of the arch down to the lower gallery), being free of any load-bearing function, could be inset with serried ranks of windows that flooded the interior with light from both sides of the building (see fig.2), and as we will see, the engineering of light sources played a fundamental role in articulating the designers' thematic conception.

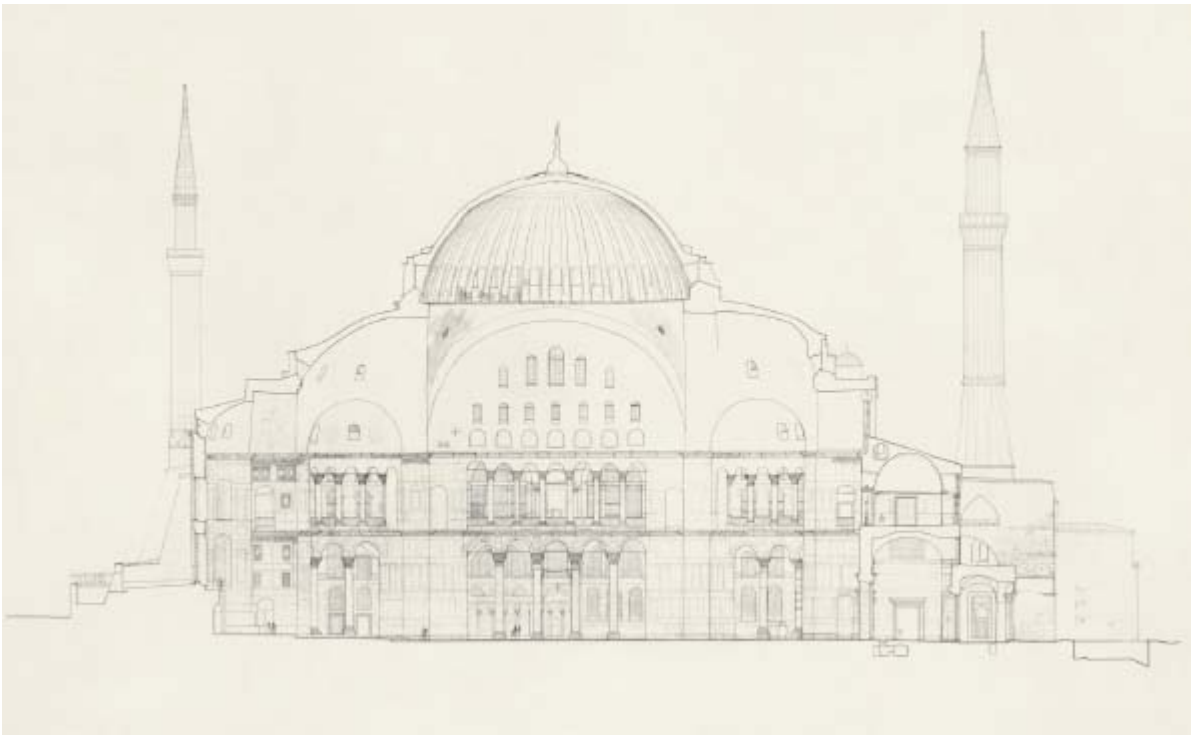


figure 2 Cut-away section through the longitudinal axis shows the load displacement effected by the cascade of semi-domes beneath the main dome. The illustration is of the current dome, the original design would have been much shallower and therefore the lateral thrust exerted by its massive weight would have been significantly greater.

THE IMMATERIALITY OF STONE · II

> Desiring, then, that all things should be good and, so far as it might be, nothing imperfect, the god took over all that is visible – not at rest, but in discordant and unordered motion – and brought it from disorder into order, since he judged that order was in every way the better. Now it was not, nor can it ever be, permitted for the best to produce anything but the most beautiful.
>
> – Plato, *Timaeus* 30a.

At the outset of this work I wrote an ekphrasis of the building that ended with seven questions. These questions arose due to the existence of features of the building's design that are otherwise difficult to account for and which cast doubt on any claim that, as originally conceived by its designers, it embodied an exclusively Christian theme. Rather, the evidence points in an entirely different direction for the source of their inspiration. Our task, then, is to see through history's discursive accretions and restore the designers' originary intent – mapping and counter-mapping the structure, its origins and the meanings ascribed to it. Let's now reprise these seven questions and use them to guide us to the heart of the building's deeply

occluded worldview. The seven issues were (1) the building's decorative scheme / its solstitial alignment; (2) the presence of plaques depicting the distinctive emblem of Poseidon; (3) the hybrid entities evident in parts of the marble revetment; (4)the marble floor designed to convey the idea of a sea; (5) the symbolism of rivers embedded within the floor; (6) the suggestion of a floral meadow rising out of the vegetal motif of the columns' capitals, and (7) the shallow, gold tesseraic reflective dome.

The decorative scheme

From its inauguration in 537 CE to the ninth century, a period of some 300 years, one of the most distinctive features of the Hagia Sophia was a complete absence of figural imagery, including any specifically Christian figural imagery. It is only after the redesign of the central dome due its partial collapse in 568 CE, some 25 years after the building was completed, that we encounter the first direct testimony of a Christian symbol, a cross placed in the centre of the reconstructed dome.[14] This fact is even more remarkable when we compare the building with such contemporary religious structures as those of, say, Ravenna – the Byzantine capital in Italy. There we find the ceilings, walls and floors of every Christian religious structure lavishly embellished with the most intense saturation of figurative and non-figurative Christian religious imagery, executed in every conceivable medium from mosaic to fresco to marble. Why, then, was the fabric of the greatest church of Christendom left so bare of any marker of its religious identity, so utterly bereft of figurative imagery (with one curious exception, that we will mention below)? The obvious answer is that by allowing the building's reflective surfaces to completely dominate every metre of space unimpeded by imagery, the design plays to a much larger thematic conception, creating an ideal surface for the reflection of both light and sound, allowing its vast vault to come into its own – but as a signifier of what exactly?

We have already seen the importance accorded to *enargeia*, the quality of luminescence, that serves as the hallmark of divine epiphany, the presence of the divine, in Hellenistic theistic discourse; and noted how Procopius experienced the light within the vault as though it had been generated within it. Equally, the building's distinctive acoustic signature is also due to its highly reflective design at the core of which is the large, free space of the vault. Structurally, the cascade of domes and semi-domes, the exedrae set on a diagonal axis, are designed to reflect sound down into and across the vault. Decoratively, the combination of the marbled floor and revetment with the tesseraic upper surfaces provides an ideal reflective space. As we saw in the *Timaeus*, mathematical ratio, geometrical and harmonic proportion are the determinative elements in the ensoulment of reality; harmony being manifested as a 'Pythagorean scale.' The cosmic import of sound is further underlined in the *Republic* wherein the eight spheres (the seven planetary spheres plus the sphere of the fixed stars) are each said to have a Siren positioned on them emitting a single note, the concord of sounds constituting the 'harmony of the spheres.'[15] The building's acoustics have recently been the subject of intensive research that demonstrates that the vast (255,800 cubic metres) vault with its hard, reflective surfaces creates a prolonged reverberation of anywhere between 8 to 12 seconds (compared to under two seconds in modern performance spaces),[16] the waves of sound being reflected multiple times across the different surfaces before dying away. The mid-level gallery that encircles most of the building and the high walkways that circle the main dome and each of the semi-domes have a handrail mounted with lamp holders that renders almost the entire circumference of the entire building at the ground, mid and upper levels suitable for simultaneous use by multiple choirs by day and by night; an outpouring of chant that, in that complex acoustic space, must have filled the vault with a great waves of harmonious sound,

> Two large half-domes and five smaller hemi-domes contribute substantially to the development of ambient sound as they redirect and

> disperse the sound but at different relative time intervals due to considerable distance between them. The impression one has when listening to reflections and reverberation on site is that multiple waterfalls are being activated at different times and places, and altogether converge down onto the listener.[17]

These studies have enabled a reconstruction of the vocalisation techniques necessary to adapt to such resonant acoustics,[18] for whilst they make ordinary speech difficult to understand they serve admirably to enhance the resonant, ethereal qualities of chant, creating a 'wall of sound' that, along with sharp contrasts of light and shadow, created a profoundly immersive experience. These acoustic properties also tended to preserve the inherited, Hellenistic melodic structures,[19] upon which many hymns were constructed, at the expense of the sense of the hymn. Quite how these complicated acoustic properties may relate, if at all, to the harmonic proportions of Plato's *Timaeus* remains purely speculative; but what is clear is that the multisensory, immersive experience that the building gave rise to was the outcome of an equally vaulting imagination; one allied with both the theoretical, mathematical and practical know-how that was, evidently, the characteristic of the small circle of experts known as *mechanikoi*. Thanks to Stanford University's 'Icons of Sound' project, these 'soaring' acoustics can now be experienced once more.[20] The following words usefully summarise the foregoing considerations, 'Hagia Sophia's aniconic programme thus created the conditions to seek the divine beyond the realm of narrative and mimetic representation.'[21]

Whilst this is certainly true, the decorative programme also served to forestall the introduction of any structurally embedded Christian imagery; and thereby opened the opportunity for the designers to encode their own, occluded, countervailing narrative in a style consistent with the overall aesthetic. In addition, as we will see, the medium of marble, with its variegated coloured surface of differing hues, veins and patterns, may in fact be composed in ways that constitute a distinct pictorial language – an emergent meaning resting, from a modern perspective, on the seemingly

'accidental' properties of the stone allied with our natural propensity to 'seek' patterns in abstract designs; but the encouragement given to us to 'see' these emergent patterns as some specific thing is, nevertheless, entirely due to a series of highly skilled operations involving the aesthetic appraisal, selection, cutting and placement of the panels. Despite the absence of conventional imagery and symbolism, the building's structural design and decorative scheme nevertheless constitutes a distinctive language; our task, therefore, is to seek to understand its syntax and grammar and so recover the designers' thematic intent, to resurrect, so to speak, the 'message' that they took so much trouble to embed at the very heart of their design – a message that has remained occulted for the last fifteen hundred years.

The building's solstitial alignment

The building's longitudinal axis is orientated directly to the winter solstice,

> It has been calculated that the sun rises about 33;36° (or 33.6° in the decimal system) south of east on the winter solstice in Constantinople. This value is virtually identical with the orientation of the church of Hagia Sophia at 33;30° (or 33.5° in the decimal system). The close correspondence between the calculated value for the ortive (the time of rising) amplitude of the sun at the winter solstice using Menalaos' theorem (33.6°) and the actual orientation of Hagia Sophia's longitudinal axis (33.5°) makes the use of astronomical computations highly likely.[22]

This alignment somewhat begs the question: was this a functional or symbolic alignment, or both? Whereas it has been thought that Byzantine churches were generally aligned so that their altars faced east, analysis shows that in fact the majority of churches[23] appear to have been aligned

with the winter solstice. In this they appear to follow the alignment of the main roads which, in the majority of the Roman towns that have been studied, are also aligned towards the winter solstice.[24] The designers of the Hagia Sophia, however, were not merely master builders (*architektones*), they were the inheritors of a profound metaphysical worldview that was interwoven with their mathematical understanding and informed its projection astronomically, topographically and stereometrically. The winter solstice was, of course, the period of maximum darkness. From the Hellenistic, metaphysically proximate corpus of Porphyry's third century CE *On the Cave of the Nymphs*, we learn that the winter solstice is ruled by Capricorn and constitutes the portal by which souls leave mortal existence,

> Cancer is the gate through which souls descend; but Capricorn that through which they ascend. Cancer is indeed northern, and adapted to descent; but Capricorn is southern, and adapted to ascent.[25]

Porphyry was both Plotinus' student and Iamblichus' chief interlocutor in the discussion titled, respectively (Porphyry's) *Letter to Anebo* and (Iamblichus' reply) *Reply of Abammon, the Teacher, to The Letter of Porphyry to Anebo* (an exchange subsequently retitled *De mysteriis Aegyptiorum* by Marsilio Ficino in the fifteenth century); so that we are dealing with sources that had formed a fundamental part of Proclus' own education – an integral part of the school of Athens' basic canon,

> he studied the master's [Syrianus'] notes on the Orphics, and also the very numerous works of Porphyry and Iamblichus on the Oracles and other kindred Chaldean writings.[26]

As an aside, there is a distinct possibility that Iamblichus' students were in Athens and met with Plutarch of Athens prior to the founding of his school, raising the interesting possibility of direct cross-fertilisation. To resume our thread, the southern solstice therefore comprises one of the two

crossing points for souls entering and leaving incarnation, the so-called Gates of the Sun, a concept found in Plato's *Republic*[27] and one of the key texts in the development of the Hellenistic political and metaphysical outlook. As we move forward with our analysis we will need to recall these smaller pieces of the puzzle and seek to see how – and whether – they fit into a larger pattern of references, and what that larger pattern might signify. Our question now is: is there any evidence for the presence of a figure or reference to Capricorn and/or the winter solstice in the southerly area of the building?

The marble revetment

> Upon the carved stone wall curious designs glitter everywhere. These have been produced by the quarries of sea-girt Proconnesus. The joining of the cut marbles resembles the art of painting for you may see the veins of the square and octagonal stones meeting so as to form devices: connected in this way, the stones imitate the glories of painting.
>
> – Paul the Silentiary, 605.

The inner narthex and the four main piers are decorated to a height of some twenty-two metres with panels of variegated, book-matched marble revetment. Laying all of the panels out with their polished faces uppermost and rotating them allows the designer to generate a variety of patterns that can then be used to develop an overall decorative scheme. Once the design process is complete the panels are transferred to the building whilst carefully retaining their sequence and position in the overall design; once there they are suspended, closely aligned with one another, on metal hooks set into the masonry so that they present a seamlessly jointed surface. The point here is that no matter how 'accidental' we might consider the

resulting patterns to be, the mounted panels are, in fact, the outcome of a highly skilled and aesthetically informed process.

Upon entering the inner narthex (the transverse gallery through which the main body of the building is accessed) high on the walls, and well-illuminated by the adjacent windows, is a marble revetment, composed of book-matched panels of *cipollino rosso* (Carium or *marmor Iasense*). Artfully placed, they represent an entire host of powerful otherworldly beings, it is for the observer to decide whether we construe them as demonic, daemonic, angelic or monstrous.

figures 3 & 4 Inner narthex revetment consisting of panels of *cipollino rosso* carefully cut and book-matched to create polysemous shapes that facilitate their 'reading' as possessed of multiple, conflicting identities – as angels, daemones or, indeed, the mythic Cyclopes.

Moving into the interior of the building, the naos, the marble revetment that covers the four massive piers providing the building's primary

structural supports, exhibits a unified aesthetic vision. Each pillar presents three distinct faces to the naos; but the revetment attached to each face hosts the same overall design so that, although we describe the design once, it needs to be borne in mind that in fact it is repeated three times on each of the building's four piers. Rising some twenty-two metres, the pier's surfaces are divided into four horizontal layers separated by bands of swirling, creamy yellow onyx.

The basal layer (composed of panels of greenish marble) and the third layer (composed of a panel of red porphyry sandwiched between two vertical panels of book-matched *verde antico*) can be described as simply decorative. Of greater interest, from an iconological perspective, are the second and fourth layers which are dominated by the presence of the single large composition of two book-matched marble panels whose compositional unity is highlighted by the use of an astragal; a thin material in a contrasting colour that has been used to frame the panels, as such it serves to isolate the composition from its lighter background ensuring that it is read as a single piece. Within these panels the book-matching process has resulted in figures reminiscent of horned beasts, arachnids and scorpions.

We earlier dealt with *acheiropoieta* as a form of visuality (wherein 'visuality' is construed as 'seeing as,' in contradistinction to merely 'seeing') characteristic of antiquity, whereby the patterns within matter were deemed to have been deliberately – as opposed to accidentally – produced by otherworldly beings. This displacement of responsibility for the appearances within materials such as marble – despite the sedulous care invested in their selection, preparation and placement – permits a 'disavowal, displacement, or mitigation of agency';[28] a description that becomes peculiarly apt in the light of the appearance of these figures in the marble revetment that covers the greater part of the building's interior surfaces.

figure 5 The marble revetment decorating one of the building's four main piers. The second and fourth layers contain framed, book-matched marble panels suggestive of hybrid arachnid/ scorpion-like figures. These panels stand in sharp contrast to the decoratively book-matched lower and middle layers where the possibility of figurative interpretation has been avoided.

figure 6 The book-matched marble revetment depicted here is typical of that found on each of the other supporting piers; and demonstrates the contrast between the framed figurative panel (below); and the decorative panels (above).

figure 7 One of the framed arachnid/scorpion-like figures that appear anywhere up to six times on each of the building's four piers.

figure 8 One of the framed arachnid/scorpion-like figures that appear anywhere up to six times on each of the building's four piers.

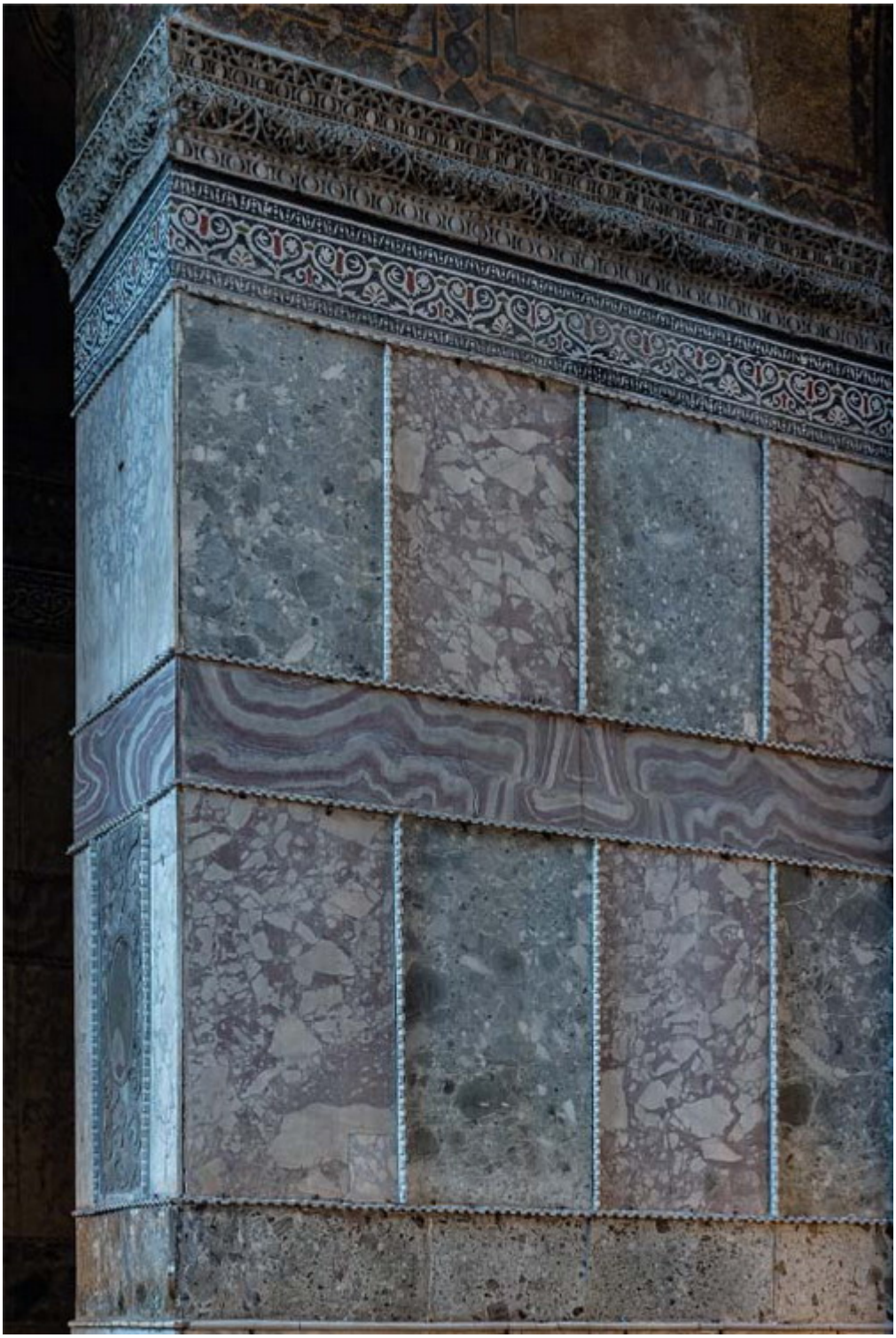


figure 9 Decorative portions of the book-matched marble revetment evince a marked contrast to the more figurative panels located on the four massive piers.

We earlier pointed to the building's precise alignment with the winter solstice and postulated that this could be construed as a reference to the southerly 'Gate of the Sun' by which souls were deemed to leave incarnation, whether naturally, through death, or as a result of practicing the 'death ritual' associated with theurgic ascent. We find such a ritual alluded to in the Chaldean Oracles, a key text for the performatively oriented school of Athens; but referenced more fully by Proclus in his *Platonic Theology*[29] and *Commentary on the Republic*[30] wherein the theurgist is described as engaging in a ritual involving a form of burial that leaves the head free.[31]

From Porphyry, we gleaned the information that the southerly 'Gate of the Sun' was thought to be governed by the constellation Capricorn; and by way of seeking confirmation for our reading we asked whether there was any symbol or image in the southerly part of the building that could be construed as representing Capricorn. A pair of book-matched, grey-veined Proconnesian marble panels situated on the south pier's southern facing face, can be most accurately described as depicting a long 'goat-like' face with large upward-thrusting horns and what can be construed as 'hooves' below; an image readily assimilated to depictions of the zodiacal sign of Capricorn, which, in its role as marking the winter solstice *à la* Porphyry, also marks the gate of departure for souls leaving incarnation. In passing, I note that the iconography of Capricorn – that of a hybrid (fish-tailed) goat – has remained constant throughout the Eastern Mediterranean world since the Bronze Age. While this confirmation of our reading is certainly welcome, can we uncover yet more specific, structurally embedded evidence tying the winter solstice and the constellation Capricorn to the world of departing souls?

figure 10 The goat-like form featured on one face of the southern pier's south facing revetment. The book-matched marble panels have been positioned at head height so that they are readily visible and, unfortunately, accessible, resulting in attempts to draw other people's attention to the face by gouging a hole in the panel where the eyes are perceived as being; a practice that can be construed as encouraging an ongoing, centuries-long conversation that attests to the continuing popularity of this 'portrait.'

Poseidon, who governs the world of souls and the winter solstice

Turning the corner around the south pier into its adjacent gallery we immediately see, high up – well above head height – on the back of the south pier the rather curious – and, to my knowledge, never mentioned – presence of two large plaques, embedded both in the pier and in the wall facing it across the gallery. Each plaque bears the distinctive emblem of the ancient Hellenic sea god, Poseidon, repeated twice. This curious device constitutes the only unique, structurally embedded identifying mark in the entire building which appears to date from its earliest days. Was this emblem placed here to provide a key to how the vast sea-like marble floor behind should be read? It is difficult not to concur with this idea, but it somewhat fails to do justice to the complexity of the designers' metaphysical conception. Can a deeper interpretation be found? We earlier alluded to the fact that the building is aligned precisely with the winter solstice, and that it is in the southerly portion of the gallery that we located the emblem of Poseidon, which is repeated four times; in relation to this finding we note that not only was Poseidon the father of Byzas (the legendary founder of the city); but the Poseidea was the ancient name for the deity's festival as well as the name of the December/January period in both the Ionian and Attic calendars during which it was celebrated.[32] Whilst a winter solstice festival to the god is attested in earlier times, by the sixth century CE, and thereafter, many ancient pagan festivals continued to be celebrated in an increasingly carnivalesque mode, although people continued, much to the consternation of the ecclesiastical authorities, to offer sacrifices on these occasions,[33] a practice that went on for many centuries. Digging a little deeper into the symbolism accorded to Poseidon, especially within the tradition represented by the school of Athens, we find that Poseidon did indeed possess a role closely related both to the winter solstice and that of psychopomp, or guide of souls. He appears as such amongst the complex hierarchies of deities articulated by Proclus,

figure 11 One of the two framed emblemata facing each other across the southern portion of the gallery. Set high in the south supporting pier and gallery wall respectively; each plaque contains two emblems of the ancient city god, Poseidon.

The second triad, that of the souls separated from the world, are the hyper-cosmic-encosmic souls, which provide the link between the hypercosmic and encosmic orders (*Plat. Theol.* VI 15). These gods ensure order in the world, and they make the beings from this world rise toward

> the intelligible (*Plat. Theol.* VI 16). These are the twelve gods of the *Phaedrus* (*Plat. Theol.* VI 19), distributed into four triads (*Plat. Theol.* VI 22). The demiurgic triad includes Zeus, who takes care of all things, Poseidon, who governs the world of souls, and Hephaestus, who fashions stars and bodies.[34]

Poseidon, 'who governs the world of souls,' is present due to his assigned duty: facilitating that 'the souls separated from this world … rise toward the intelligible.'

Because of the complexity of this evidential material let's briefly summarise our findings: (1) the entire building is aligned to the winter solstice; (2) Porphyry assigned Capricorn, in the winter solstice, to the southerly 'Gate of the Sun' by which souls leave incarnation; (3) the appearance of a goat-like figure dominates the book-matched marble panel facing south on the southerly pier; (4) two plaques bearing the emblem of Poseidon appear on an adjacent face of the same, south pier (as well as on the facing wall); (5) Poseidon was the father of Byzas, the city's legendary founder; (6) Poseidon's ancient festival, the Poseidea, was celebrated at the winter solstice; (7) and finally, Proclus assigns Poseidon the responsibility for guiding souls leaving incarnation, and with assisting their transition towards the intelligible world.

The physical proximity of this number of independent, yet iconographically and metaphysically related, factors is too overwhelmingly consistent to be the result of mere chance. Moreover, it clearly demonstrates that the designers were, in terms of their metaphysical understanding, Hellenists of the school of Athens rather than devout Christians. Finally, and on a closely related point, within Proclus' *Platonic Theology*, his arrangement of the deities corresponds with the entourage of deities following Zeus in their ascent towards the 'vault of heaven' in Plato's *Phaedrus*, that greatest of metaphors for theurgic ascent,

> Now the great leader in heaven, Zeus, driving a winged chariot, goes first, arranging all things and caring for all things. He is followed by an army of gods and spirits, arrayed in eleven squadrons …[35]

And it is this entourage that the theurgist, and the deceased initiate, hope to join as the entourage sweeps upwards towards the 'top of the vault of heaven' where enlightened souls can step outside the cycle of existence to experience,

> the colourless, formless, and intangible truly existing essence, with which all true knowledge is concerned, holds this region and is visible only to the mind, the pilot of the soul … In the revolution it beholds absolute justice, temperance.[36]

We have entered, in other words, the Platonic *chôra*; that formless space, bereft of all qualities, that is nevertheless, paradoxically, the *plenum* experienced during moments of non-dual awareness:

> and this is a law of Destiny, that the soul which becomes a companion to a god and capable of apprehending truths, will be free from harm.[37]

With this cryptic statement, Plato alludes to the absolute degree of freedom attained when a state of inner liberation prevails through the providential grace of a deity. We need to file this information away as yet another potential portion of our puzzle. A little later we will endeavour to see how it might fit into a larger pattern when we come to assemble all of our pieces into a single composition. Having solved this part of the larger puzzle, we must now turn our attention to the next significant portion, the sea of marble and its four rivers.

The Sea of Marble

The building's vast marble floor appears to have been inlaid with carefully book-matched Proconessian marble so as to be suggestive of the ripples crossing an expanse of water. From the earliest days, ekphrasae remarked upon this feature and employed it as a poetic metaphor.[38] Proconessian marble was the city's 'local' marble; it was quarried on an island in the Sea of Marmara, a sea whose very name derives from the Greek *marmaros* (marble); indeed this watery origin, and the surface appearance of the stone when laid out in carefully arranged and fitted panels across the the floor are redolent of their watery origins and nature,

> The theories of geology promulgated by Aristotle and Theophrastus had taught that marbles were deposits of purified earthy matter suspended in water that percolated down through the earth's crust to deep reservoirs, where the whole brew was frozen or fired solid by earthly humours.[39]

Marble, that most visually fluid of solids, with endlessly variegated, undulating veins, was commonly thought of as a precipitate that could revert, under appropriate conditions, to its original liquid nature. Thus Aristotelian science and the skill of book-matching with whiteish, grey-veined Proconessian marble combined to inspire a decorative pattern of repeating, ripple-like effects suggestive of the ripples over a large body of water. No doubt our inherent pareidolia, our tendency to perceive significant patterns within amorphous shapes, is essential to the creation of such artistic effects, which are in no way random, the result of sheer chance; onlookers' responses to the marble floor was the planned and carefully calibrated outcome of craftsmanship.[40] From the earliest days, ekphrasae remarked, poetically, upon this feature and employed it as a metaphor. What body of water did the designers envisage this feature as representing?

figure 12 A small section of the marble floor depicting a different style of cutting and placing the book-matched grey-veined Proconnesian marble to produce a ripple effect that is carried across the entire marble floor space. From the earliest times ekphrases likened it to a sea.

At this stage, and on the basis of this evidence alone, it is impossible to say. It has been suggested that it is meant to represent the primordial waters, the Hellenistic Okeanos – except of course that the primordial ocean circled the Earth. Alternatively, are these the primordial waters of Genesis over which God hovered?[41] Thankfully, our speculation can be further narrowed down due to two factors: firstly, we have just demonstrated that the designers were pursuing a specifically Hellenistic metaphysical narrative and agenda; and secondly, the traces of four green bands inlaid into, and crossing the transverse axis, of this 'body of water.' Let's examine the conjunction of these two features and see if we can isolate what body of water is being alluded to, and what the four green 'rivers' running through the middle of it might signify.

The rivers of the underworld

The vast expanse of the marble floor was once traversed by four broad bands of green Thessalian marble (*verde antico*), generally interpreted as representing rivers.[42] With the exception of one band, only traces of these now remain. Interestingly, the earliest descriptions – those of Procopius and Paul the Silentiary – do not mention them. That said, the floor expanse is vast, and the eye is naturally drawn upwards to become lost in following the soaring columns, the complexity of the curved semi-domes and the vastness of the illumined central dome itself; in short, the building is designed to so draw one's attention away from the floor at one's feet and upwards to a more expansive zone of meaning high above. In addition, if standing within the vault when it is crowded, the floor becomes doubly obscured. There is, then, no mention of the 'rivers' before the fourteenth century, some eight hundred years later, when it was suggested that they represent the four rivers of the biblical Garden of Eden – an interpretation that has been generally discarded.[43]

From an aesthetic perspective, the bands which are arranged asymmetrically across the floor space, are of differing widths, and demonstrate no alignment either with their surroundings or with the columns bordering the floorspace. It has been suggested that they were used as positional markers to guide the progress of elaborate liturgical processions; but had such a usage been pre-planned, both their asymmetry and subsequent neglect are puzzling when so much care has evidently been taken concerning every other decorative feature.[44] Finally, the Byzantine *Explanation of the Order of the Palace* (better known as the *Book of Ceremonies*), which sets out the protocol for all state events, makes no mention of any such protocol. Although the surviving copy dates from the tenth century, its protocols doubtlessly evolved over a considerable period of time, being copied and recopied. However that might be, their symbolic status as 'rivers' flowing in or under a 'great sea' remains; as, indeed, does the

question as to which rivers and which sea these features might reasonably be construed as symbolising.

In this case the issue of their asymmetry – in the context of the geometrical precision evidenced throughout the design of every other element of the building's fabric – takes on a significance all of its own. We need to ask: as an iconographic construct, what does this level of asymmetry connote? How are we to understand it? And what iconological role does it play in articulating the edifice's larger theme? The presence of such planned asymmetry amidst the otherwise highly ordered world of the building's design is highly suggestive of the concept of the unruly and the chaotic; our question, therefore, is: is there such a realm within the corpus of texts familiar within Hellenistic tradition? The answer is *yes*. Predictably, perhaps, the reference occurs in one of the Platonic dialogues that regularly features in the teaching of the school of Athens; and as we saw, it is also one of the texts taught by Ammonius in Alexandria, it is Plato's *Phaedo*. Towards the end of the *Phaedo*, a dialogue concerned with death, the postmortem judgement of souls and their subsequent fate, Socrates expounds an extended myth that seeks to reinforce the importance of living a just life – one of virtue and non-attachment – as the only means to pre-empt the processes that await the wicked and the unenlightened after death since,

> I fancy that those men who established the mysteries were not unenlightened, but in reality had a hidden meaning when they said long ago that whoever goes uninitiated and unsanctified to the other world will lie in the mire, but he who arrives there initiated and purified will dwell with the gods. For as they say in the mysteries, 'the thyrsus-bearers are many, but the mystics few.'[45]

This much cited paragraph, describing the vastly differing receptions of the 'initiated and purified' compared to the uninitiated, and 'unpurified,' upon reaching the underworld, has an ancient provenance long predating Plato.

We earlier saw reference to it in the sixth or seventh century BCE Homeric *Hymn to Demeter*,

> But whoever is uninitiated in the rites, whoever takes no part in them, will never get a share of those good things once they die, down below in the dank realms of mist.[46]

What is significant from our present perspective is the ancient conception of the uninitiate laying 'in the mire' – and therefore of the underworld conceived of as a watery and muddy place. This idea receives its most fully developed treatment in the *Phaedo*, wherein we encounter a description of the mythical geography of the underworld (based upon a circulatory model of the human body) in its relationship with visible reality, and of the treatment accorded to the deceased, who receive their 'just desserts' based upon how they have lived their lives.[47] At its core is a great tumult of waters that courses and surges through a complex system of underground channels, rising to feed springs, lakes and rivers above ground, before plunging once more into the underworld where it splits into four great underground rivers.

> Now these streams are many and great and of all sorts, but among the many are four streams …[48]

Each of the four named rivers was associated by Proclus with a specific elemental quality: Oceanus – Water: Acheron – Earth; Pyriphlegethon – Fire; and Cocytus – Air.[49] We should not be too concerned with the ontological status of this 'geography,' Plato is more than a little equivocal about it. He states that it would be nonsense for anyone to take his words literally, but that 'this or something like it is true concerning our souls,' in other words it is metaphorically 'true.'[50] Given that his objective is to encourage the ethical contemplation of one's own conduct from the perspective of divinisation as conceived as a liberation from the chains of

heimarmene or fate within the cycle of lives, then the mythic tale provides a perfectly adequate vehicle for this purpose. The myth itself appears to have been derived from the Orphica; indeed one of the final generation of the school of Athens, Olympiodorus the Younger, informs us that 'Plato borrows everywhere from Orpheus.'[51] The myth continued to exert a strong influence within the tradition established by the school of Athens, being subjected to exegesis not only by Proclus but by Damascius (who interprets the 'rivers' in terms of the activities necessary to purify the soul: Oceanus – purification; Acheron – chastisement; Pyriphlegethon – heat; Cocytus – cold);[52] and Olympiodorus the Younger, who adds further layers of detail concerning the duration of the purificatory processes.[53]

To summarise this material, Plato's myth has three components. Firstly, it posits a metaphoric geography of the underworld that highlights the importance, characteristics and course of four 'rivers' and their relationship with the souls of the deceased. Secondly, it describes the postmortem journey and fate of the soul through the ethically purificatory agency of the 'rivers' which are connected to the deepest realm of the underworld, Tartarus. As an aside, and a point of interest, Peter Kingsley has ascribed these complex fluid mechanics to a lost Orphic poem, *Krater* by Zopyrus of Tarentum, a fifth century BCE Pythagorean and mechanical inventor.[54] Thirdly, by maintaining adherence to one's ethical imperatives for consecutive life times, traditional myth promises the ultimate liberation of the soul. We find this blessed state described in the poetic language of myth in Pindar's fifth century BCE ode, *Olympian* 2, to which we will have recourse when we come to assemble the various pieces of our puzzle. We have now assembled the second 'portion' of physical evidence, derived directly from the building's decorative design; the vast book-matched marble floor depicts the Hellenic underworld with its four purificatory rivers; rivers that provide – for the unredeemable, such as tyrants – the gateway to the deepest level of the underworld, Tartarus.

Whereas the majority of the daemon-like figural motifs are found in the revetment of the inner narthex; the arachnid-like figuration features in the second and fourth bands that circle each of the four vast supporting piers so that three arachnid-like figures appear on each of the two bands facing into the naos for a total of six, astragal framed figures on each pier; wherein the framing serves to draw our attention to the compositions.

The significance of these figures can be found in the most archaic strata of Hellenic myth; specifically, the myths surrounding Poseidon's son – the great hunter, Orion. Whether for his attempted rape of Artemis, his rape of her handmaiden, Oupis, or of his host's daughter, Merope; or, alternatively, his threat to hunt and kill all living creatures on the planet so enraged Gaia that she sent a scorpion to sting and kill him. The scorpion therefore serves as an apt symbol for the retributive justice awaiting those who violate our sense of natural justice.

Now whilst the employment of this symbolism might appear, at least to modern eyes, as too obscure to serve such a significant symbolic role; to the educated Hellenist not only would the original story be familiar; its familiarity would have been further underlined by the fact that the myth served a mnemonic role in relation to astronomy (one of the four disciplines - along with mathematics, geometry and music – that constituted the quadrivium). For example, Aratus' classic text on astronomy, *Phaenomena*, recounts the various myths concerning Orion but utilises them to underline the astronomical fact that, 'at the rising of the Scorpion in the East, Orion flees at the Western verge.' (643)

figure 13 One of the framed arachnid/scorpion-like figures that appear up to six times on each of the building's four piers.

The floral meadow

> One might imagine that he had come upon a meadow with its flowers in full bloom. For he would surely marvel at the purple of some, the green tint of others, and at those on which the crimson glows and those from which the white flashes, and again at those which Nature, like some painter, varies with the most contrasting colours.
>
> – Procopius, *On Buildings* 1.60

Most of the gallery's ceilings have been repainted over the years so that, today, it is difficult to gain an impression how they originally looked. In one small area, however, restoration work has uncovered the original mosaic design, revealing a green background set with multi-coloured flower-shaped forms that are suggestive of a spring meadow covered in small flowers; which is exactly how Procopius described this part of the building's decorative scheme in the excerpt quoted above. The floral design accords well with the capitals' foliate forms, acanthus leaves, rising on columns beneath the upper gallery. Once more the decorative scheme bids us ask the same sort of question: Why depict a meadow? And, what meadow might this be?

The context, by this point, should be sufficiently clear: we are dealing with a traditional Hellenistic eschatological landscape transposed via the medium of marble and mosaic to the decorative fabric of the building's entire interior. The theme of the destiny or fate of souls upon death has employed, up to now, symbolic references to both the southerly Gate of the Sun, by which souls leave incarnation, and the watery underworld with its four rivers, by which souls are purified. This leaves the following questions unanswered: what happens between these two stages? How, and where, do souls undergo the judgements upon which the mechanism of divine justice is predicated? In fact, the answer formed a fundamental part of Hellenistic literary culture and features prominently, in the context of school of Athens, in a long sequence found in Plato's *Gorgias* that relates the traditional story of the judgement of souls,

figure 14 The original mosaic decoration of the upper gallery – the area where the emperor, empress and high officials would be seated – depicts multi-coloured floral forms set against a green background suggestive of a flowery meadow. This decorative scheme emerges from the deeply undercut involute foliate forms of the marble capitals that connect the supporting columns to the gallery..

> Now in the time of Kronos there was a law concerning mankind, and it holds to this very day amongst the gods, that every man who has passed a just and holy life departs after his decease to the Isles of the Blessed, and dwells in all happiness apart from ill; but whoever has lived unjustly and impiously goes to the dungeon of requital and penance which, you know, they call Tartarus.[55]

The significance of the meadow soon appears,

> Now I … have appointed sons of my own to be judges; two from Asia, Minos and Rhadamanthus, and one from Europe, Aeacus. These … shall give judgement in the meadow at the dividing of the road, whence are the two ways leading, one to the Isles of the Blessed, and the other to Tartarus.[56]

The meadow, then, is the place of judgement from which two roads lead: one to the Isles of the Blessed, which leads us upwards through the building to the vaulted and domed areas whose signature aesthetic is gold; and the other to Tartarus, the underworld, which is, again, indicated as lying beneath the surface of the marble floor below. The section goes on to describe how the judges of the dead, seeing each soul stripped to its essentials, may, on occasion, have to judge a 'Great King or some other prince or potentate' whereupon the judge,

> perceives the utter unhealthiness of his soul, striped all over with the scourge, and a mass of wounds, the work of perjuries and injustice; where every act has left its smirch upon his soul, where all is awry through falsehood and imposture, and nothing straight because of a nurture that knew not truth …[57]

Since such souls are incapable of redemption, all that can be done with them is to put them on display while they are undergoing their everlasting punishment as an example, and a warning, to others. As we saw earlier, that archetypal tyrant, Archelaus, again features prominently amongst them,

> Among them I say Archelaus also will be found … and every other despot of his sort. And I think, moreover, that most of these examples have come from despots and kings and potentates and public administrators …[58]

The political content and context of these passages is quite clear. It is, therefore, ironic that the gallery where the meadow of judgement features so prominently is precisely where Justinian and Theodora, with their courtly insiders, would have sat during the services. The educated, covert Hellenists amongst the courtiers, standing, perhaps a little in the background behind the imperial couple, must have looked upon the scene with barely concealed amusement.

The mirrored dome

> It appears not to rest upon the solid structure, but to cover the space [as if] suspended from the golden chain of heaven
>
> – Procopius, *On Buildings*, 46.

We earlier discussed the symbolism of the dome, seen in its original form by Procopius, and related by him to the symbol – so much a part of the shared ideation of the school of Athens – of the golden chain; that multivalent *sumbolon* of spiritual continuity and connectivity. Unfortunately, the visitor of today cannot share that experience. The seismically induced failure of an arch resulted in the partial collapses of the main dome in 558 CE necessitating it being completely redesigned and rebuilt; further partial collapses, resulting in extensive repairs, occurred in both the tenth and fourteenth centuries.[59] As a result, the building's present dome is not only pitched much higher than the original, but is visibly supported by a system of ribbed vaults that produce an undulating surface upon which, although a fair percentage of the original gold tesserae has been retained, nevertheless lacks the reflectivity of the original. Despite its impressive appearance, today it only provides a visual approximation to how the original might have looked and behaved – and we can say 'behaved' because the original dome was an active element in the building's architecture, one that was specifically designed to respond to both external and internal sources of light every day, all day and all year round.

The present consensus, then, is that the original dome was much shallower, a segment of a sphere rather than a hemisphere. Due to this shape, its compressive qualities would have greatly augmented its tensile strength[60] and afforded the possibility of constructing it without the use of ribbed vaulting; in which case it would have possessed a much shallower, smoother under-surface to serve as the base upon which an effective reflective surface could be constructed. Whatever the actual pitch of the

dome – a subject of continued speculation[61] – we can be fairly sure of one thing: it played a key role in the articulation of the designers' overall thematic conception.

We have already seen that, on one level, the Hellenistic eschatological theme of 'divine justice' demarcates the different levels of the building, so that at ground level, we are symbolically in the underworld; at gallery level, in the meadow of judgement; and therefore, at the level of the vaulting, dome and semi-domes, in the Isles of the Blessed ruled by Kronos. Having completed our metaphoric ascent of the eschaton, we can now pursue the symbolism on a deeper, more metaphysically nuanced level.

Domes, as evidenced by the Pantheon's enormous 43 metre span from around 126 CE, constituted a well-established engineering speciality; and indeed one of the Hagia Sophia's *mechanikoi*, Isidorus of Miletus, had written a paper on the mathematics of such vaults; we can, therefore, safely assume that the designers knew exactly what they were doing and the risks involved. We can also conclude that the dome was designed in this way in order to achieve a specific effect; one that trumped traditional architectural thinking and engineering convention. That effect was realised by covering its interior surface with carefully angled gold tesserae. These were produced by laying gold leaf between two sheets of glass and then baking, and so fusing, the layers together before cutting the sheet up to make the individual tesserae. By then setting each tessera at a specific angle into a plaster base covering the interior of the dome's surface the designers created what was, in effect, a vast gold reflective surface that would infuse the vault below with a concentrated golden glow. So pronounced was this effect that Procopius describes the impact of the illumined vault upon the observer with the following words,

> Indeed one might say that its interior is not illumined from without by the sun, but that the radiance comes into being within it, such an abundance of light bathes this shrine.[62]

Recent conservation work on the dome's mosaics noted that the 'quality of both the materials and the workmanship was very high … The gold tesserae of this [sixth century] period set densely (an average of 180 per 100 cm^2), produced a strong reflection of light. The silver tesserae are similar in size and were produced like the gold; the spacing however is not as dense (an average of 160 per 100 cm^2).'[63] The precise design and creation of such reflective surfaces was the mathematical and scientific research specialisation of Anthemius of Tralles (see Appendix II for details of the optical qualities of the most likely design based upon Anthemius' own annotated diagrams). Throughout the day, and all year round, a series of embrasures or channels set into the base of the shallow drum upon which the dome rested admitted light, which was then reflected up onto the dome by the silver tesserae which covered the window sills; and from there the light was reflected down into the naos below. Even today, when sunlight streams through the windows around the base of the rebuilt dome, the sills can be seen to reflect the bright azure light of the sky outside.

Creatively innovating architectural tradition in order to create tangible gains from the intangible medium of light echoes the architectural vision that already underlay such edifices as the Pantheon and, as it was used there, provides a clear indication of the primacy accorded to metaphysical concerns over and above those of aesthetics, function and especially, traditional engineering practice.

The dome's reflective daylight effects would have been available all year round, and would have extended into the evenings. A circular walkway inside the dome being set with candelabras and housing a choir would reflect both light and sound, in unison, off the dome's reflective surfaces – the harmonics of the building having been incorporated as an integral design consideration.[64] We have already noted the fact that the play of light within the vast vault, its concentration through the medium of the thirty-two metre diameter gold reflector, suffused the vault with dazzling luminescence; a luminescence that also laced the galleries with intense

shadows. From the foregoing it is clear that the one unique feature of this design was to amplify the reception of light upon the reflective marble surfaces of the vault below. In effect, the entire design and its decorative scheme was arranged so as to allow for the sculpting of light as the chief rationale for, and centrepiece of, the architectural design. It is this fact, when added to the lack of figurative imagery, that strongly suggests the presence of a design concept quite unlike that of any similarly purposed building. Our task, then, is to attempt to articulate the ideas underlying it, and then to locate their origin within the cultural strata of sixth century Byzantium. Our question, at this stage, is: does this reflected light work with the other elements that we have identified to express one holistic theme? We will have to defer answering until we can assemble all of the pieces of our puzzle.

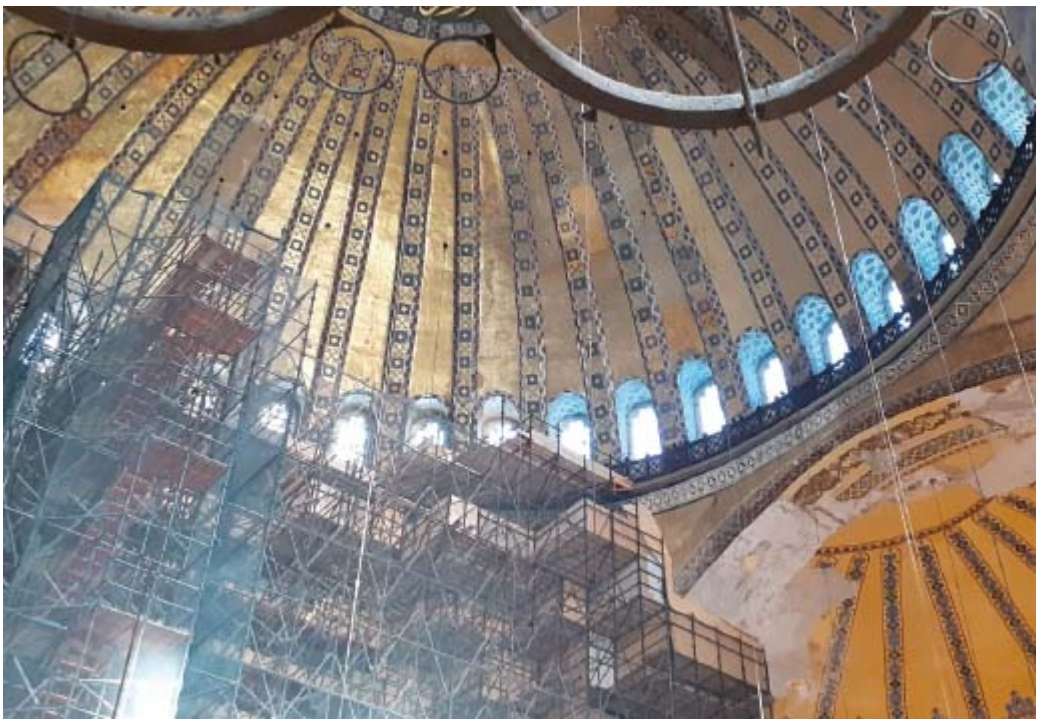
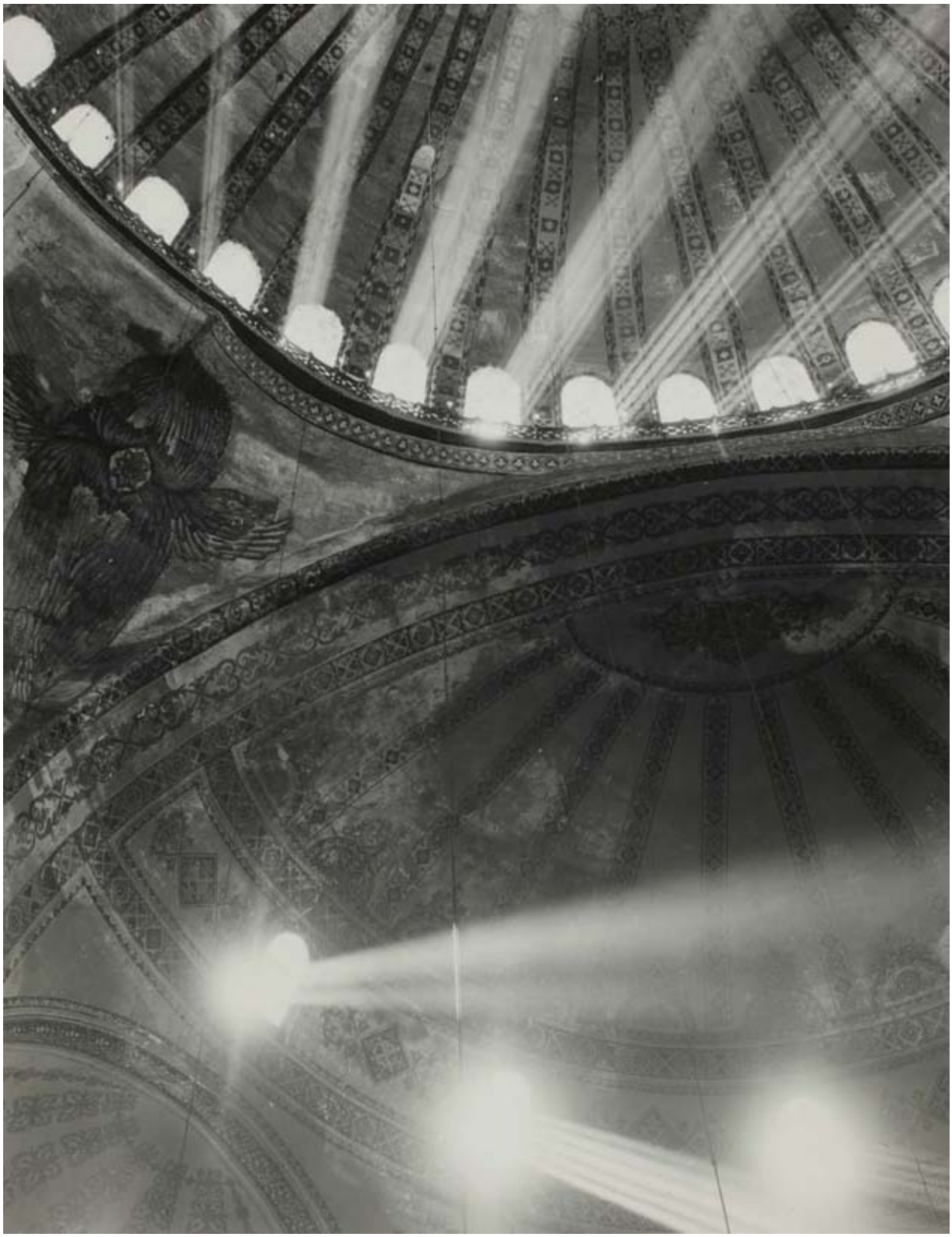


figure 15 The replacement dome was pitched at least 10 metres higher than the original but still retains a fair portion of the original gold tesserae. The sills clearly demonstrate the reflective properties of the carefully angled silver tesserae used to reflect light onto the gold tesserae of the dome; an echo of how the original would have been engineered.

IV

THE RETURN OF THE GOLDEN AGE OF KRONOS



THE ICONOLOGY

> We must go back to this question about the world: After which of the two models did [the world's] builder produce it … If, now … this world is beautiful, and its maker is good, clearly he looked to the eternal.
>
> – Plato, *Timaeus* 28c–29a

From the outset of this work we have sought to address one fundamental question: what overarching theme guided the designers' ambitious vision as they planned and supervised the creation of this, the largest and most innovative building ever devised, one that would remain unequalled for the next thousand years? Clearly this begs a further question: did the designers, in fact, have an overarching theme in mind, an ideology or metaphysical outlook that they felt impelled to express; or did they merely set out to satisfy the emperor's demand for a building that exceeded all others in terms of its size and whose austere atmosphere would awe the congregation? To answer the question requires that we reenter their world and attempt to see things through their eyes; in other words, we need to recontextualise the evidence and view it through the lens of a world still steeped in the millennia old traditions of metaphysical Hellenism in all of

its various dimensions – literary, mathematical and scientific – set against a continuing backdrop of polytheistic religious practices and spiritual traditions.

The *mechanikoi* responsible for the design and oversight of this remarkable building hailed from the still vitally Hellenistic heartland of Ionia, which encompassed many of the great centres of Hellenic culture: Ephesus, Miletus, Priene, Tralles and Aphrodisias. It was a region possessed of a continuous, one thousand year old tradition of advanced metaphysical and scientific research, starting with the founding fathers of natural philosophy in the sixth century BCE and including such figures as Thales of Miletus, Anaximander of Miletus and Anaxagoras of Klazomenae. A thousand years later, any pride that scientists such as Anthemius and Isisdorus may have still felt about this distinctive intellectual legacy was surely balanced by an awareness of a looming threat to that culture and its spiritual traditions. By the sixth century CE the great cities of Ephesus and Miletus had been largely Christianised; by 529 CE the school of Athens had been forced to vacate the premises that it had occupied for over a century, only to be dispossessed for a second time. Rendered homeless, a group under the aged Damascius abandoned the city for an unknown and uncertain future. Travelling east, presumably along the 'Royal Road' from Sardis, they made their way towards Persia. Disappointed with their reception there, they were said to have returned, and thereafter disappear from the pages of history. The Hellenistic curriculum of the school of Athens, taught by Ammonius at the school of Horapollo in Alexandria – with which both Anthemius and Isidorus were associated – had, since 487 CE, been curtailed to avoid offending Christian sensibilities; though continuing, discreetly, in more private settings. As for Tralles, inland from Miletus and one of the few remaining centres of Hellenistic spirituality and pagan practice, it was not by chance that this town was made the centre of operations when John of Ephesus, aided by fellow Monophysite monks, came to destroy the region's surviving Hellenistic culture from 546 CE onward. It is a measure of the resistance they encountered that their mission endured for the next thirty years. Within a decade or so of the

Hagia Sophia's completion in 537 CE, the Hellenistic spiritual legacy that had informed and made possible its creation was largely expunged from the public sphere; though it continued to nourish the region's spiritual life, albeit more indirectly through the faculty of the imagination, for many of the texts that had been mined by the Hellenists for their spiritual content retained their position in the curricula of the various professions as required reading. Even at the level of elementary education, long extracts from Homer were committed to memory each day.[1]

The *mechanikoi* of that day formed an educated elite, exemplary representatives of a blended spiritual and scientific culture; at once engaged in mathematical and scientific research, experiment and innovation, and yet, at the same time, allied to that 'golden chain' of illumined teachers who were held to have incarnated to carry their spiritual work forward within their own select fields of activity. Their education had taught them to examine reality with an eye to its inscape, its underlying spiritual qualities, its inherent luminosity; qualities that their special craft, architecture, sought to replicate and amplify. Being possessed of a spiritual philosophy with a clear view of the varied manifestations of tyranny and insight into its underlying spiritual malady, it was incumbent upon them to reassert the fundamental ethical values upon which a spiritual life depends. The evidence of the building's own structural and decorative symbolism demonstrates that the way in which they chose to do so was to appropriate the emperor's self-aggrandising project as an opportunity to model – in stone, and for all time – the metaphysical spiritual world of Hellenistic tradition; a world proceeding from the Good, but also providentially reverting back to it through the progressive refinement of the sensibility and the cultivation of higher orders of ethical behaviour. Given my thesis – that the building's structural and decorative design is anchored within this tradition, and more specifically, in the Hellenistic tradition descending back to the school of Athens – it is only natural to seek the building's originary theme amongst the texts that stood at the very heart of their beliefs and practices. One of the fundamental metaphysical building blocks of the school of Athens was the cycle of procession (*prohodos*) from and reversion

(*epistrophe*) to the state of immanence (*monē*).[2] This cycle was either driven by *heimarmene* (fate or destiny) or else by *eros* (love). The essential alchemy of spiritual work being the conversion of the one, *heimarmene*, into the other, *eros*; or in mythical terms, the purification of the Titanic elements in one's nature in favour of the divine, Dionysian spark. With this framework in mind we can address the iconological question: What thematic conception connected the building's structural design and decorative scheme?

THE CYCLE OF PROCESSION

Every effect remains in its cause, proceeds from it, and reverts upon it.
– Proclus, *Elements of Theology* 35

It was characteristic of Platonism generally, as indeed of Pythagoreanism, to articulate a logically progressive unfolding of the cosmos from an unknowable source that was in and of itself the uncaused cause of everything else. The *Timaeus* articulates the process of creation in terms of a geometrical progression of forms. When we apply this geometrically inflected logic to the schematics of the building, we derive two distinct architectural motifs: firstly, proportionality, as applied to both the plan and elevation of the building and keyed to that most ancient and spiritual of measurement systems, the royal cubit; secondly, the evolving pattern of architectural forms: the point or centre of the dome instantiates the circle; the circle is balanced on the top of a series of triangles, which are in turn supported by a series of arches, which represent the form of the semicircle, and rest upon the tops of the piers arising from the square base. The entire structural design of the central core of the building therefore resembles,

though from a Proclean rather than strictly Platonic perspective,[3] the style of the process of creation outlined in the *Timaeus*,

> in looking at the plan of St Sophia … it is almost as if we see, translated in stereometry, the geometry of the divine as interpreted by Proclus in his commentary on Euclid.[4]

And further,

> We can at least say that in visiting the new church of St Sophia in the middle of the sixth century, those with an advanced education in the philosophy and mathematics of the time would with little difficulty have found there, expressed in three-dimensional space, the geometry of the divine that Proclus had found in Euclid.[5]

As we noted, this emanative process was thought of as the first half of a larger metaphysical life cycle whose second half, *epistrophe*, was that of reversion to the Source.

THE CYCLE OF REVERSION

> Everything whose nature it is to revert reverts upon that from which it derived the procession of its own substance.
>
> – Proclus, *Elements of Theology* 34

We can now begin the process of assembling the pieces of our puzzle, and start to discern the larger pattern revealed by them. We can break the task down into the following four groups of features that appear to bear a direct relationship with one another: (1) the book-matched Proconnesian marble floor, its inlaid green marble bands and the multicoloured marble revetment facing across it; (2) the building's overall alignment to the winter solstice; the emblems of Poseidon positioned in the south adjacent to a pair of book-matched marble slabs that resemble a goat-like face; (3) the transformation of the sombre-hued revetment to a floral meadow-like decorative scheme, and (4) the illuminating, gold tesseraic, reflective dome.

Firstly, the combination of the great sea with its four rivers was identified in Plato's *Phaedo* as the watery realm of the underworld whose four rivers surge above and below ground connecting, ultimately, with the underworld realm of Tartarus, the realm to which tyrants are consigned

never to return, whereas the other souls are consigned, for varying terms, to the purifying action of one or other of the four rivers depending on the form of injustice that they committed in life. Allied with and amplifying this underworld theme we find apt symbols of retributive justice in the form of the scorpion-like figures (drawn from the myth of Poseidon's son, Orion, killed by a scorpion sent in retribution for his acts of gross injustice) and repeated throughout the second and fourth layers of the book-matched marble panels facing into the naos on each of the building's four main structural supports.

Secondly, we were struck by the conjunction of three elements: the building's alignment to the winter solstice, the presence of a goat-like figure adjacent to (being appended to the same pier as) the distinct insignia of Poseidon – whose festival, the Poseidea, marked the winter solstice and whose responsibility it was to act as the guide of souls leaving incarnation – in the south of the building's longitudinal axis. What do these elements have in common except the fact that, in esoteric lore, the southern solstice is ruled by Capricorn and that it is the southernmost Gate of the Sun by which souls leave physical incarnation.

Thirdly, the sombre tones and imagery of the revetment give way to the meadow-like mosaic decoration of the upper galleries; a field of green covered in variegated floral patterns and colours. Beyond the level of meadow-like imagery we enter the purified realm of Kronos. The world of gold is both that of the gold tesserae covering the upper surfaces of the building, but more especially, as testified by Procopius who saw the building in its original state, the golden glow of the Timaean *chôra* that these reflective surfaces project into the void of the vault; that formless realm that is also a perfect *semeion* of the phenomenology of non-dual awareness.

THE BUILDING'S THEMATIC LAYERS

Based upon our detailed consideration of the physical evidence as well as the background of the designers, it is clear that the building embodies, somewhat like a Russian doll, a carefully designed metaphysical structure that can be separated into its constitutive layers.

Firstly, at the most detailed level, we segregated the internal decorative scheme into three layers representing the Hellenistic eschatological vision of 'divine justice' comprised of the symbolic depiction of the underworld and its purificatory rivers, the meadow of judgement and the Isles of the Blessed. We find this theme attested in the earliest Hellenic literature from the time of Homer[6] and Hesiod[7] and used by Pindar in his poetry;[8] but it received its most detailed, and politicised, articulation in Plato's *Gorgias*[9] and, of course, the *Phaedo*.[10]

Secondly, we perceived that the structural and decorative design complement one another as the respective parts of a universal metaphysical construct that reached its most sophisticated articulation by Proclus:[11] the cycle of procession (*prohodos*) and reversion (*epistrophe*) that combines the top-down structural geometry of creation, as outlined in the *Timaeus*, and in Proclus' commentary thereon, with the bottom-up theme of soteriological

ascent (or reversion) through aligning one's life with the various virtues that act as manifestations of divine justice.

Thirdly, in a move away from these traditional mythological and literary narratives, to something like a pure spiritual metaphysics, we discerned that one of the key rationales behind the building's design and decoration was the role that these play in modelling the intangible qualities of light and sound as distinct, and pronounced, elements of the building's architecture. It is quite clear that the complex, multisensory, immersive nature of the building's reflective surfaces were a carefully planned and executed outcome of its thematic design.

THE RETURN OF THE GOLDEN AGE OF KRONOS

> All reversion is accomplished through a likeness of the reverting terms to the goal of reversion.
>
> – Proclus, *Elements of Theology* 33

We have discussed how the innovative and risky design pursued by the designers was adopted to realise a specific thematic effect – one key facet of which was undoubtedly the creation of a golden illumined space within the vast vault that would be sufficiently noticeable, as Procopius attested, as to constitute a 'thing-in-itself.' As we have already seen, the most likely source for this idea was Plato's *Timaeus* – the one metaphysical text devoted to mathematical ratios, geometric proportion and musical harmony – in which the notion of space as a 'thing-in-itself' finds, for the first time, its complex articulation. We are speaking, of course, once more of the Platonic *chôra*. In attempting to explain the cosmogonic and metaphysical operations of the *chôra*, Plato compares it to a mould in which gold is being processed; first being moulded into one shape and then another, so that one cannot speak of what it 'is-in-itself,' but only say of it, that it is gold,

> Now imagine that a man were to model all possible figures out of gold, and were then to proceed without cessation to remodel each of these into every other, then, if someone were to point to one of the figures and ask what it is, by far the safest reply, in point of truth, would be that it is gold.[12]

The dome's gold reflective surface is, at one and the same time, representative of the domain of Kronos, who rules both the Hesiodic 'Golden Age' and the Isles of the Blessed, and of Plato's Timaean discourse about the *chôra*, represented by the vault's gold-imbued atmospheric glow. As we move forward, we will find that all of these elements, in fact, overlap. The notion of place – *topos* – as a 'thing-in-itself' received its profoundest metaphysical articulation with Proclus, who described it as a luminous body of light that acted as the interface between the body and the soul,

> Light itself, at all levels of being, is 'nothing other than participation in divine existence.'[13]

THE TOWER OF KRONOS ON THE ISLES OF THE BLESSED

But they who endure thrice over
in the world beyond to keep their souls from all sin
have gone by the way of Zeus to the tower of Kronos

– Pindar, *Olympian* 2

We find the missing context within which each of these components finds its proper place (and whose partial geography we read of in Plato's *Phaedo*) in Pindar's *Olympian* 2. There the underworld and the theme of judgement are connected with the broader vista opening out to those purified souls who pass out of the underworld and proceed by the way of Zeus to the tower of Kronos on the Isles of the Blessed; an idyllic state, suggested by references to the ocean breeze, flowers, trees – our 'spring meadow' – and water; one accessible to those who 'endure thrice over.'

Unlike the Hesiodic myth of the World Ages, with its progressive degradation of reality as it descends from the Golden Age to the ages of Silver, Bronze and, ultimately, Iron, this scene is not set in a mythic past, but rather in an unchanging, ever-present now that is accessible to all,

should they so choose. We find it described in the earliest stratum of Hellenistic literature, Hesiod's *Works and Days*,

> First of all the deathless gods … made a golden race of mortal men who lived in the time of Kronos … And they lived like gods without sorrow of heart, remote and free from toil and grief: miserable age rested not on them; but with legs and arms never failing they made merry with feasting beyond the reach of all evils. When they died, it was as though they were overcome with sleep, and they had all good things; for the fruitful earth unforced bare them fruit abundantly … They dwelt in ease and peace upon their lands … loved by the blessed gods.[14]

Physically, the Hagia Sophia is a combination of two themes: structurally, the building reprises the top-down process of creation designated by the geometric forms of point, circle, triangle, semicircle and square[15] – as noted by Procopius in the sixth century[16] – a sequence stemming, ultimately, from Plato's *Timaeus* but articulated by Proclus. Viewed architecturally from the top down, the structure reprises the concept of *prohodos* (procession), the emanatory paradigm of the *Timaeus* which provides the metaphysical basis for the related concept of participation upon which the various participative modes – *sunthemata*, *sumbola* and *acheiropoieta* – are all predicated and are, indeed, variants of. It is by virtue of their participative nature that artificial structures (*sumbola*) and their constitutive materials (*sunthemata*) retain their connectivity with the Source and allow it to exercise its influence upon those who contemplate its metaphysical properties.

Decoratively, however, the interior design also reprises the complementary soteriological movement back to the Source known as *epistrophe* or reversion; derived, ultimately, from Orphism, whose underworld component – including the process of judgement – is described in Plato's *Phaedo* and referenced in Pindar, but whose missing superstructure – the subsequent passage of the pure to the tower of Kronos

on the Isles of the Blessed – is only related in Pindar's *Olympian* 2; based upon a common source, now lost, but deriving ultimately from the Orphica.

The aspect of this convergence between the cosmological *chôra*, the generative space, and the phenomenology of theurgic union is that the theurgist unites with and so becomes co-creative with the demiurge, hence, 'theurgy is demiurgy';[17] but in what sense is this 'co-creativity' to be understood? Absent the oft perceived 'Platonic dualism' posited between the forms and matter – an imposition upon, rather than something integral to, Platonic metaphysics[18] – and absent the ethical dualism that characterises many of the varieties of gnosticism, we are faced with a far more archaic notion founded upon the mythological tale that divides the aeonic Golden Age of Kronos from its 'subsequent' aeonic degradation, under Zeus. Now given that the gods are eternal, there can be no progression from age to age or from one generation of deities to another, they all continue to eternally co-exist.[19] That being so, the Golden Age endures in our own time, wherein it continues to stand as a metaphor for the state of spiritual repleteness; the immeasurable peace and sense of an absolute security that engulfs those who enter the formless *chôra*, the genetrix that is non-dual awareness. Nor is any ultimate 'stabilisation' of one's awareness in either of these states indicated, but rather that,

> Our soul sometimes lives in accordance with intelligible reality, and it is then said that the intelligible world begins, and sometimes in accordance with sensible things, when the sensible world is said to begin …[20]

The intelligible world being ruled by divine providence (*pronoia*); the sensible world by destiny or fate (*heimarmene*).

Having once experienced the ecstatic formlessness of the intelligible world, its effortless refulgence infiltrates and subverts the soul's experience of the sensible world, upending and loosening the grip of all those concerns related to what was, is or is yet to come; and so, acting as a constant beacon by which we can reorientate ourselves and derive sounder navigation going

forward. It was in this sense, perhaps, that the golden chain – that divine race of serially incarnating souls – sought to provide practical assistance so that others would also be purified and so guided towards the transcendence of destiny or fate guided by the direct light of the illumination that they receive through divine providence. This is the spiritual duty that drives the acceptance of successive, voluntary rebirths; and which demands that those on the spiritual path contribute, each in their own way and according to their abilities, to the goal of hastening, once more, the return of the Golden Age, the Age of Kronos.

> Zeus is also the cause of the invisible life of the All, the supplier of intellect, and the leader of intellectual perfection; but he elevates all things to the kingdom of Kronos, and, being a leader in conjunction with his father, brings into existence the whole peri-cosmic Intellect.[21]

THE ROLE OF THE BUILDING

Given this background, we provided a variety of lenses through which we can now view the building: as a physical model of the metaphysical cycle of the procession and reversion of souls, articulated most fully by Proclus; as a repository of traditional lore, preserving the Hellenistic eschatological model attested in literary form from the time of Homer onwards; and as an architecture of dissent, a 'charismatic' act in the midst of tyranny. Highlighting the pivotal role of virtues, or their absence, it reasserts the central importance of seeking alignment with divine justice, which has spiritual as well as political implications. We may also add, that taken as a physical entity, through the living presences invoked through the force of *sumbola*, and innately present in the materials as a result of *sunthemata*, it serves as a functioning mechanism of human transcendence. Culturally, the structure acts as a repository for the metaphysical preoccupations of a Hellenistic culture that evolved from the great mystery cults of antiquity to become the metaphysical engine of subsequent European thought. Finally, as an engine predicated on the valorisation of a set of higher order ethical virtues, it acts as a standing warning of the metaphysical consequences incurred by political and religious elites consequent upon the institution of an unjust regime. The consummate design and execution of this project has

resulted in a structure that, irrespective of one's beliefs, continues to enroll one's imagination and facilitate an accession to a higher order of sensibility. By creating a likeness of the metaphysical process of reversion, it has succeeded in inducing that feeling, unknowingly, in the many who visit it.

Epilogue

THE PATRIA OF CONSTANTINOPLE

Blessed are those who will inhabit that holy city,
a narrow strip of the Thracian shore at the mouth of the Pontos,
where two pups drink of the grey sea,
where fish and stag graze on the same pasture.

– Pythian Oracle[22]

As was the case with genealogies, *patria* formed a popular literary genre in late antiquity. They recalled the myth-history peculiar to a region, a city or a people; the legendary accretions and archaic traditions of sacred places, rites and festivals. As such they sought to delineate their subjects through their most essential relationships – a topography constructed from mythical narratives interweaving the lives and loves of the ancient Hellenistic gods as they fleetingly traversed the linear plane of the temporal. The *Patria of Constantinople* written by Hesychius of Miletus, a chronicler resident in the city during the sixth century, provides a comprehensive account of its archaic origins; one that recontextualises the physical topography and history of its imperial centre as bounded within a mythically-imbued landscape. Hesychius' work intersects, like the building of the Hagia Sophia itself, Justinian's various 'great persecutions' of educated Hellenists both in

the city and throughout the Hellenistic cultural heartland, the littoral cites of the Aegean, Pergamon, Sardis, the Ionian cities of the Meander valley and of course, Athens, Damascus and Alexandria. How does this background affect the way in which Hesychius composed this work, and more to the point, how we now read it?

Hesychius' Constantinopolitan landscape lays fanned out behind its headland, the 'Horn,' bound on three sides by water. To the north by the Golden Horn, the confluence of the Cydarus and Barbyses, the 'sweet waters of Europe'; to the east by the Bosphorus, snaking north up to the Euxine Sea; and to the south, by the gaping mouth of the Sea of Marmara; but our tale commences with the promptings of an oracular vision and a quest. The Argives, sea raiders – whether known as Achaeans, Mycenaeans or Danaans – put to sea through the promptings of the Pythian priestess of Delphi.[23] Thereafter the chronotype governing our narrative slips back and forth between the eternal time of myth and the linear progressions of history; and as myth and history blend together as *mythistorema* (a word coined by poet George Seferis), we lose our ability to once more separate them. The Argives' great Moon goddess, Io, whose bovine rape – facilitated by Hermes' murder of the many-eyed Argus – raised Hera's ire and set Io off on her travels;[24] transforming the landscape from formless space (*chôra*) to place (*topos*), so that as she crosses the strait separating Asia from Europe it becomes a definite body of water, the Bosphorus. At the so-called 'horn' (*keras*) of the headland, Io gave birth to a daughter, Keroessa, the 'horned.'[25] That ending, *-essa*, like *-assa*, *-assos*, *-issa*, is so evocative of the archaic Luwian substratum of Anatolian culture, reminding us of the time-depth from which these emergent shoots of myth arise. Born near the altar of the nymph Semestre, Keroessa, in her turn, bears a child to the sea god, Poseidon, and names him Byzas.[26]

Raised in the wilds of Thrace, Byzas is led to his destiny by following an eagle, and is brought to the same headland where his mother bore him and where he will found the city that was to bear his imprimatur, built with the

help of Poseidon and Apollo.[27] After completing the circuit walls he constructs sanctuaries for the gods: at Basilike, a temple and statue to Rhea; near the sea, a temple and sanctuary of Poseidon; a sanctuary of Hecate on the site of the Hippodrome; and an altar for the Dioscuri near the altar of Semestre. Near the Strategion he built altars to Ajax and Achilles; at Sykai an altar for the chthonic seer, Amphiaraos; and, a little up from the temple of Poseidon, a sanctuary of Aphrodite and Artemis.[28]

This curiously detailed account of archaic sacred sites counter-maps the city's better-known Christianised topography, made familiar by Hesychius' contemporary, Procopius of Caesarea, in *On Buildings*, a work that exhaustively catalogues the churches commissioned by Justinian throughout the city. Hesychius' *Patria* counter-maps its Christian identity and reaffirms the city's ancient roots, its Hellenistic past.[29] His archaising cartography serves to delimit the headland and enfold the imperial centre – the triplicity of political, popular and religious identity represented by palace, hippodrome and the Hagia Sophia, that ambivalently named 'Holy Wisdom' – in the ageless web of Hellenistic narrative.

There is a much earlier mapping of the area that we can also turn to. A century before Constantine transferred the capital to Constantinople, Dionysius of Byzantium, the second century CE geographer, described the general region of the Black Sea and Bosphorus during which he alludes to the headland and its myth of Io; and describes the presence of an archaic temple of Poseidon, next to the sea, along with an altar dedicated to Athena.[30] This reference to Athena leads us back into our larger narrative; for although Proclus was Lykian by descent, he was born in Constantinople. Marinus describes how he was welcomed at birth, by the city's guardian, Athena Poliouchos, the goddess of wisdom who overshadowed and guided his footsteps thereafter, appearing in dreams to direct him to study philosophy in Athens, and who was the recipient of his most frequent devotional rites.[31] The Hagia Sophia is the supreme dedicatory offering to a conception of wisdom in its most elevated, abstract sense; one expertly encapsulated in the building's sophisticated stereometry and decorative design. The *Patria*'s repeated references to Poseidon in his role as Byzas'

father, and to archaic temples of the god, find their most resonant echo in the enshrining of the distinctive *emblemata* of Poseidon, guide of souls through the southerly, solstitial gates, in the Hagia Sophia's southerly corner, directly under the gaze of Capricorn.

With respect to the seasons, another exceptional document produced by an educated Hellenist in Constantinople during the sixth century – one that embraces a traditional Hellenistic outlook to the exclusion of all reference to Christianity – is John of Lydia's *On the Months*. An antiquarian and high court official, John of Lydia provides a comprehensive counter-mapping of the entire Christian liturgical year, month by month, from the perspective of its Hellenistic rites, rituals and festivities. He includes the exegesis of the related myths and detailed discussions of their metaphysical significance citing such, by now, familiar sources as Plato's *Timaeus*, the Chaldean Oracles, distinguished Hellenists of the school of Athens – Proclus, Ammonius and Syrianos – as well as Plotinus, Porphyry and Iamblichus.[32] From our present perspective, *On the Months* is particularly enlightening when it comes to the consideration of the winter solstice.

The celebration of the winter solstice during these centuries had both a traditional, popular component as well as a hieratic significance. The solstice festival was a continuation of, and in some ways a culmination of, Brumalia – an alternative name for the far more ancient Kronia, the festive season celebrating Kronos.[33] Between the 24th of November and the 17th of December Brumalia was celebrated throughout the Hellenistic world; *bromios* – 'roaring' or 'noisy' – also being an ancient epithet of Dionysus.[34] With the onset of the solstice itself, John of Lydia, informs us that, 'the farming people would slaughter pigs for the worship of Kronos and Demeter – and hence even now the "Pig-Slaughter" is observed in December … and the first fruits … would be offered to the priests of the Great Mother.'[35] The 692 CE Council of Trullo condemned the behaviour exhibited during the seasonal festivals of the Bota and Brumalia 'and the full assembly which takes place on the first of March.' In particular they singled out, 'the dances and mystic rites performed by both men and women, in the name of those falsely called gods by the pagans, according to

ancient custom and directly contrary to Christian life.'[36] They also condemned the fact that, during these rites, 'men and women exchanged clothes; wore masks related to the comic, tragic, and satyr plays; invoked the name of Dionysos when pressing grapes or pouring wine; and acted as if possessed by pagan demons.'[37]

Much to the consternation of the clergy, these festivals were still being celebrated in Constantinople itself (never mind the rural areas) as late as the tenth century,[38] and, indeed possibly as late as the twelfth. John of Lydia offers a hieratic explanation of the season's myths, writing that Kronos' imprisonment in Tartarus by Zeus is explained by Ammonius as a metaphor in which Kronos represents the soul and Zeus the force of generation, and that, just as the soul is confined in the body (*demas*), this is the equivalent of imprisonment (*desmos*), or being 'imprisoned like an oyster in its shell,' as Plato's *Phaedrus* has it.[39]

The city's yearly festivities recognised the many faces of the divine; at the more hieratic level of the educated Hellenists these transitions, gradations, rubrics signified the different spiritual memes encoded within myth and legend but actualised through the phenomenology of participation that continued to resurrect the sacred landscape of myth and project it into the abstracted language of an enduring sacred architecture.

APPENDIX I

ASTROLOGICAL ELECTIVE READING FOR THE COMMENCEMENT OF CONSTRUCTION OF THE HAGIA SOPHIA

Gamze Güzen, MSc. Architecture, AMMO, Astrologer

While researching what would be the most appropriate hour (12:00–13:30) that may have been chosen on the 23rd February 532 CE to start the construction, I came to the conclusion that they needed to choose the most proximate positive date rather than the optimal date so that the construction could be moved forward as fast as possible. Given the need for haste, the best possible day and time within the next few months was in fact chosen. It would not have been possible to encounter a better sky position for another five or six months after the chosen date.

The most striking issue is that two important social planets, Saturn/Kronos and Jupiter/Zeus, were retrograde just one day before the 23rd February; and on 23rd February Saturn/Kronos turned to a stable position (the period before resuming its motion). This left a question as to why they did not wait for Jupiter/Zeus to also end its retrograde movement even though it would turn direct on the 28th February, only five days later. Saturn/Kronos appears to have been the most important factor in choosing

an appropriate time to start construction work, and this was why they waited especially for it to cease its retrograde. Saturn represents such topics as starting the construction of large and permanent structures, laying foundations, and important organisations. However, the main question here was: if they had waited a few more days, Jupiter/Zeus would have also moved out of retrograde to a stationary position, and the stationary Saturn/Kronos would have moved closer to its direct motion. Why didn't they wait a few more days? It appears that the timing was chosen very carefully, and that they chose the best election within the shortest possible period. One of the primary determinations was that the astrologers did not want to miss the New Moon that would have taken place when the Sun/Helios was in Pisces and the Moon/Selene had triplicity dignity in Pisces. A moment when a New Moon occurs in Pisces is a very beautiful time to start the construction of a religious building.

Had this important period of time been missed, it would have taken one year for the Sun/Helios and Moon/Selene to come together again in Pisces. Moreover, the next Pisces New Moon would not be as favourable for such an important event as it would have taken place in the twelfth house (known as a debilitated house) which would not have been as beneficial compared to a Sun/ Helios-Moon/Selene conjunction in the first house. This situation must have been an important reference point for the astrologers as it represents both the closest and most appropriate date to start construction.

The Moon/Selene is strong in Pisces, and when the Moon is in Pisces, intuitive depth increases, both universal and spiritual perception are at their highest level, and it is an appropriate time for spiritual attunements. This new moon occurred in the first house when the ascendant was also located in Pisces. This is a sign that the impact of the construction on the public was an important factor. In addition to the Sun/Helios and Moon/Selene, Mercury/Hermes was also in Pisces.

Pisces is a sign that symbolises being between two worlds, ie between the reality of life and the spiritual or eternal life; in other words, physical and divine equilibrium. What does Mercury/Hermes add to this combination?

Mercury/ Hermes represents the mind and intelligence and also encompasses mathematics and geometry. Additionally, communication, documents, drawings, handicraft … in a sense, the basic criteria match with architecture. Besides, how meaningful would a partile conjunction of Mercury/Hermes be with the Part of Fortune? In terms of the astrological importance of this election, it is necessary to mention the other determinations; for example, it is very meaningful that five of the seven planets were located in the water group signs in the chart on the chosen date. While the three important personal planets; the Sun/Helios, Moon/Selene and Mercury/Hermes are in Pisces and the fourth personal planet Mars/Ares is in dignity in the water sign Scorpio. Despite its retrograde position, Jupiter/Zeus, the planet of divinity, spiritual mood and collective belief, was in Cancer, creating a grand trine between the three water groups which indicates a very fortunate timing. Considered to be the most auspicious aspect of all the angles, trines are fluent angle patterns which helps energy to flow between planets smoothly. It ensures that the tasks that are started at that moment are completed easily without facing major obstacles. Considering that it would be difficult to recapture such a suitable moment for the beginning of this construction in the near future, it was not wrong to ignore Jupiter/Zeus' retrograde position.

The fact that Jupiter/Zeus and the Moon/Selene are in 'mutual reception' on the chart, is another important astrological indicator that needs to be emphasised. The mutual reception of Jupiter/Zeus, the magnifying planet representing religious and philosophical thoughts, beliefs, spiritual wisdom and dogmas, and the Moon/Selene, which symbolises our feelings and emotional needs, shows the best integration of individual spiritual trust with collective belief.

It is also remarkable that Saturn/Kronos, which represents durability, permanence, solid structures and especially mastery of construction and masonry, is located at the last degree of the fourth house in the chart, which represents belonging, family, ancestors, roots, grounding and laying foundations. But Saturn/Kronos, just on the border of the fourth and fifth houses, is at 29° which is considered an anaretic degree, which in some

sources is attributed to malefic features and as a debilitating degree. Moreover, as I mentioned above, Saturn/Kronos is at a stationary position in the chart before it turns to straight and gains its strength back. According to classical interpretations, it is not wrong to say that such a planetary location may cause some difficulties in revealing its positive characteristics. But on the other hand, 29° have several meanings, such as breaking known habits, pushing the boundaries, challenging the existing order/course and, being popular, powerful and famous. Another determination is that Saturn/Kronos at 29° in the fourth house, which is ruled by Gemini, is a good settlement as Gemini's nature is partly compatible with Saturn's/Kronos' because Saturn/Kronos in Gemini has triplicity, one of the important dignities for a 'morning chart,' according to Ptolemy's theory of 'essential dignities and debilities.' However, if Saturn/Kronos was settled in the fifth house ruled by Cancer, it would remain detrimental according to the same theory and would not be able to reveal the constructive features attributed to Saturn/Kronos. This is why Saturn/Kronos' placement in Gemini and in the fourth house was definitely the better choice, even if it is borderline. The timing is very suitable for architectural planning. As a result, when I put these contradictory determinations about the start of construction on the table and matched them with other criteria, I saw that the time elected under the conditions of sky of the day, was the best possible timing. I think the most impressive part of the chart is that many criteria are considered one by one and weighed on the scale of advantages and disadvantages.

The other issues that attracted my attention:

The ruler of ASC, Sun/Helios, Moon/Selene, Mercury/Hermes, three of the personal planets and ASC of the chart, is ruled by Jupiter/Zeus, known as the great benefic planet, located in the fifth house.

Jupiter/Zeus, from the 5th house, makes the most benefic angle to the first house, which is a beautiful condition.

The Sun and Moon, which are called 'lights,' both make a trine with Jupiter/ Zeus, (considering the lights have a domain of scan/sweep areas up to 15°). The partile conjunction of Mercury/Hermes with the Part of

Fortune provides good protection against the possible troubles that may be caused by the square aspect between Saturn and its dispositor Mercury/Hermes.

In addition to all these, it is also quite impressive that Mars/Ares, which as a malefic is often thought to add negative features to the chart in electional astrology, is here placed in one of the most appropriate houses in this chart so that it becomes one of the actors of the grand trine. Also it is worth highlighting that Mars as the natural ruler of Scorpio, is expected to work well in the chart.

Scorpio is the sign in which Mars/Ares can best reveal the aspect of deep emotions and spiritual depth. Mars/Ares in the ninth house (representing religious issues, spirituality and beliefs) provides the fire required for the construction of such a spiritual building. The trine it makes to Saturn/Kronos has the feature of a dynamic support that may be required for the structural responsibility Saturn/Kronos undertakes in the chart.

The positive angle made by Venus/Aphrodite, which is one of the personal planets and known to represent art, beauty, all material and spiritual values, from the 11th house of luck and hope, to the 1st house in which the lights and Mercury/Hermes are also located, is also an important issue.

Venus/Aphrodite in Capricorn has both triplicity and terms administrator value. These features, which were revealed as essential dignities, mean that Venus/Aphrodite added value to the chart in terms of both spiritual and material values required during the construction period and is also important for its support and potential for a brilliant construction process.

The fixed stars in the chart and their effects

Castor

In the chart, Castor conjunct with Saturn/Kronos in the fourth house is related to the father, roots, soil, ancestors, land, large monuments, buildings and constructions. In the chart, Castor is located at the IC of the chart which is the bottom point with Saturn/Kronos. According to Ptolemy, Castor is of the nature of Mercury/Hermes, if rising in the chart, it points to honour, intellect, great learning. If culminating, business activity, intellectual gain through books and intellectual matters; it gives distinction, a keen intellect, success in law, fame and honour. But if in an inappropriate placement, is often followed by loss of fortune and disgrace, sickness, trouble and great affliction.

Castor, influenced by Mercury/Hermes, has a blend of Jupiter/Zeus in it. In the chart, when linked with the Moon/Selene, it has the effect of blessing people with a good nature and fine morals. It is also supposed to convey refined manners.

Castor, α Gemorium, Castor's Mercury/Hermes quality has a positive side to it from the combination of intellectual Gemini and intuitive Cancer. As it is in the Hagia Sophia's event chart, Castor's connection with Mercury/Hermes goes deeper still.

19°–20° Castor and 22°–23° Pollux are the twins and both are connected with fame and success; both are hard, dominant fixed stars. They both symbolise discrimination, sharpness of mind, power and strength. The effects of Castor and Pollux are similar, giving sudden fame and success. The fourth house where Castor is located is one of the four powerful houses, and here a combination with Saturn/Kronos will give seriousness, endurance and successful organization. The square with Mercury/Hermes, on the other hand, can be regarded as an indication of the aim; to complete a large and difficult construction with different techniques despite challenging conditions.

Alpheratz

The second prominent fixed star in the event chart. This star is in the Alpha Andromeda constellation and it is a fortunate fixed star, being Jupiter/Zeus and Venus/Aphrodite in nature, giving a philosophical point of view, and being both helpful and tender. In the chart it is located in the first house and conjuncts both with Mercury/Hermes and the Part of Fortune which also has a conjunction with the Moon/Selene and Sun/Helios.

When this star is in relation with Sun/Helios, it gives honour, popularity and promotion, in relation with the Moon/Selene, determination, fame and wealth.

If it is in relation with Mercury/Hermes (as in the chart) it supports an active mind, benefits legal cases, symbolises the churchman and abets pioneering work and prominence. It gives the ability to speak and write on religious issues and on science and philosophy, which fits very well with the main function of the building. In the chart, the fixed star Alpheratz also has a very good angle with Venus/Aphrodite, which adds such qualities as a clean and tidy appearance, a quiet and peaceful life, health and luck in matters of speculation.

Alpheratz (Alpha Andromedae), Caph (Beta Cassiopeiae) and Algenib (Gamma Pegasi) are together known as the Three Guides that mark the prime meridian of the heavens. They were believed to bless those born under its influence with honour and riches.

The constellation Andromeda has an influence similar to that of Venus/Aphrodite according to Ptolemy. It is a generally favorable constellation denoting that which is honorable and eminent. Badly placed, however, it can portend earthquakes. Accordingly, we can attribute the building's resilience to huge earthquakes to the good location of the Alpheratz star in the chart.

APPENDIX II

AN EXPLANATION OF THE ILLUMINATION IN THE HAGIA SOPHIA'S ORIGINAL DOME

Harper Feist

Construction on the Hagia Sophia was completed and the basilica inaugurated on 27th December 537 CE, less than six years after construction started. Commissioned by the Roman emperor Justinian, it was at that time the largest enclosed structure in the world and was amongst the first to contain a fully pendentive dome. The building was designed by Isidorus of Miletus and Anthemius of Tralles, students of the mathematician Eutocius of Ascalon and, possibly, of Proclus' student, Ammonius Hermeias, as well. Isidore was an eminent mathematician and is known, besides for his work on the Hagia Sophia, for the first compilation of Archimedes' work. Anthemius, on the other hand, is best remembered for his fascination with burning mirrors.[1]

A contemporary description of the appearance of the Hagia Sophia dome by Procopius survives, which focuses on the visual impact of the dome; in his *On Buildings* we read,

> one might say that its interior is not illuminated from without by the sun, but that the radiance comes into being within it, such an abundance of light bathes this shrine. The upper part of this structure ends in the fourth part of a sphere, and above it another crescent-shaped structure rises, fitted to the adjoining parts of the building, marvellous in its grace, but by reason of the seeming insecurity of its composition altogether terrifying. For it seems somehow to float in the air on no firm basis, but to be poised aloft to the peril of those inside it.[2]

Procopius was right to question the soundness of the structure. Earthquakes in 553 and 557 caused fissures in the main dome and eastern semi-dome. During another earthquake in 558, the eastern semi-dome failed.[3] The collapse was caused by an excessive bearing load on the piers sustaining the dome, pushed outward by the same flat profile of the dome that permitted the amazing illumination effects described by Procopius.

The comparison between the likely original dome structure and surviving domes in other churches makes it clear that the first dome of the Hagia Sophia was absolutely unique, never duplicated because of its lack of structural integrity.

The honour of performing the restoration fell to Isidorus the Younger, nephew of Isidorus of Miletus. The entire vault was demolished and rebuilt higher than before. Isidorus also redesigned the dome, erecting a taller, ribbed dome with pendentives. Eight Corinthian columns were added in 560. This reconstruction, completed in 562, gave the main building its present shape.[4]

Procopius' remarks have long been a source of speculation amongst scholars and researchers: the illumination effects inside the original dome were apparently extraordinary and were to a significant degree absent in the replacement. Besides the obvious beauty of the dome, said to be coated with gold mosaic, the light across the interior surface was so evenly distributed that it added to the impression, created by the 40 'windows' penetrating the dome, that the dome itself was floating. The optical effect described is an illumination that was not only spatially uniform in the

extreme but also did not change significantly over the course of time, both with time of day and season. Both impressive effects can be explained through an examination of the structure of the dome and the windows; the effects are due to the interaction between a spherical reflector – the dome – and a multitude of ellipsoidal reflectors, one on each windowsill. Anthemius of Tralles, one of the Hagia Sophia's architects, was perhaps the world's first expert on ellipsoidal and parabolic optics. Burning mirrors, one of the first documented uses of parabolic optics, were famously thought to have been deployed by Archimedes, subsequently documented by Pliny,

> It surpasses all wonders that a day goes by wherein the whole world is not consumed in flame. For concave mirrors turned toward the sun ignite more easily by its rays than does any other fire.[5]

In this account, Archimedes arranges huge mirrors in the harbour of Syracuse, his native city, during the siege of 215–212 BCE. These mirrors were allegedly used to set the Roman fleet ablaze as it was anchored there.

Tentative and implicit descriptions of this phenomenon give way a few centuries later to explicit and technically detailed descriptions by Anthemius. He argues in a fragment from *On Paradoxical Mechanisms* that the use of a single large mirror capable of burning items at a distance is impractical.[6] Loathe to besmirch the memory of Archimedes, Anthemius carefully proposed instead an array of hexagonal mirrors hinged with connections at the sides of a larger hexagonal mirror, essentially constructing a very large, although coarsely curved, single mirror. He posited that four or five such composite mirrors would be necessary to effect burning at a bow-shot's distance.

He states also that 'if the angle in the direction toward the focus is very acute, burning will occur all along the axis, rather than only at the focus.' It seems likely from this highly detailed portion of the description that Anthemius had constructed a working model of his system.

It is thought that the burning mirrors under study by Anthemius were inspired by work from the third century BCE, by Diocles.[7] While not all the math is sensible, Diocles clearly presented the first known proof of the focus-directrix property of the parabola and may have been its discoverer. It is proof of the level of optical sophistication that none of these designs are based on spherical mirrors; it was known even at that time that spherical mirrors are prone to aberrations that cause the relative focal volume to increase, which diminishes the energy density available for heating, and then burning, surfaces.

It was known, then, that parabolic reflectors were superior to spherical ones in the formation of a tight focal point, which significantly increases the solar power available to heat a surface set at that focal point. In a more familiar example, in the headlights of modern cars, the bulb is set at the focal point of a parabolic reflector such that the light is emitted in parallel rays.

In addition to his recognized expertise in parabolic optics, Anthemius also invented a way to cause sunlight to illuminate a given spot – in the case of the Hagia Sophia, on the edge of the dome – irrespective of the time of day or season. In *On Paradoxical Mechanisms*, he describes the creation of an elliptical reflector with one focus at the aperture and the other at the point to which the ray is to be reflected.[8] Both summer and winter solstice positions and equinox positions are modelled. It was this system that scholars believe he used to illuminate the original dome of the Hagia Sophia.

In Anthemius' approach, the absolute amount of light admitted to the system is limited by the fact that the aperture into the dome was located at the end of a shaft. The first hint of this is Procopius' description of the building. Line 42 of Book 1 of *On Buildings* (*De aedificiis*) Procopius reads in the original Greek, ὑπεραίρει γάρ, οἶμαι, τὴν γῆν ξύμπασαν, καὶ διαλείπει τὸ οἰκοδόμημα κατὰ βραχύ, ἐξεπίτηδες παρειμένον τοσοῦτον, ὅσον τοὺς χώρους, οὗ δὴ τὸ διῃρημένον τῆς οἰκοδομίας συμβαίνει εἶναι, φέγγους διαρκῶς ἀγωγοὺς εἶναι. This paragraph can be translated 'For it towers above the whole earth, as I believe, and the structure is interrupted at short

intervals, openings having been left intentionally, in the spaces where the perforation of the stone-work takes place, to be channels for the admission of light in sufficient measure.'[9] Or, very similarly: 'For it rises higher than the whole earth, I think, and the construction is broken up at regular intervals with openings deliberately made in the spaces where the perforations are in the stonework as ducts for letting in an adequate amount of light.'[10] These translations are quite telling. The word that is rendered as duct or channel, ἀγωγός, is distinct from the word for an ordinary window, θυρὶς.[11]

These ducts, arrayed all around the dome, create a diffuse light source that varies less over the course of year than if the sun were directly admitted to the building. A reflector was positioned at the bottom of each duct such that sunlight from the exterior was reflected from it onto the edge of the dome. Anthemius' original design is shown in figure 1 below. It shows a cut-through of a roughly ellipsoidal form (labeled ΘZHAMΞO on the diagram) with focal points above the ellipse at A and B, illuminated through the duct from positions Δ, Γ and E which represent the extremes of the location of the sun on summer solstice, equinox and winter solstice, respectively. A is the point at which the light originating outside the duct is focused on the region at the edge of the dome.

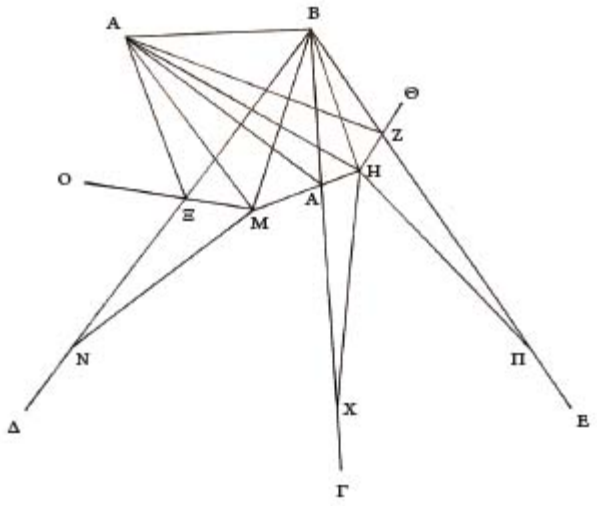


figure 1 Anthemius' original reflector diagram.

The ellipsoidal reflector accepted light from the aperture – the exterior duct opening – and reflected the light no matter what the entrance angle, contingent on season and time of day – to a constant spot. Using this strategy in all forty windows, the dome was illuminated all day, every day, through the entire year. The size of the outer opening of the duct is wide enough to deliver light to the surface of the reflector at both extremes of the sun's location (summer and winter solstice). Because of the shape of the reflector – like a small section taken from an American football – all available angles presented by the shape of the channel from the exterior to the interior of the building are projected to one point at the edge of the dome.

It is tempting to also interpret the shape of the optical path in a theurgical way: Proclus, who undoubtedly exerted an important influence on Anthemius, was known as not only a mathematician and philosopher but as an initiate of various mystery cults. These mystery cults, including the Orphic and Elusinian mysteries, emphasized, amongst many other concepts, the movement of man toward god, from a dark state into a light one. And what an amazing journey the sunlight had from the outside of the church to the glowing interior.

The model of the ellipsoidal reflector describes the admission of sunlight as the incident angle varies by seasons to its delivery to the edge of the dome. The reflective behaviour of the light as it dances over the dome was also designed by Anthemius, in a different diagram, one demonstrating the more familiar optics of spherical mirrors. This diagram in figure 2 shows how any incoming light that is parallel to the axis B–Δ (ray ZH, for example) will be focused near point K and shows the effect of the slight focusing aberrations that make it a poor candidate for setting naval vessels on fire at distance. This is not the effect that explains the uniform illumination that follows, but many modern scholars consider this drawing was the model for the original dome.

The original dome had no drum section, and it had ducts instead of tall windows, yielding the carefully gathered and reflected light described previously. It was much flatter than the current one. The original duct and

reflector approach delivered the light to the edge of the dome at a glancing angle that allowed the light to reflect many times more than the current dome, leading to the very uniform illumination.

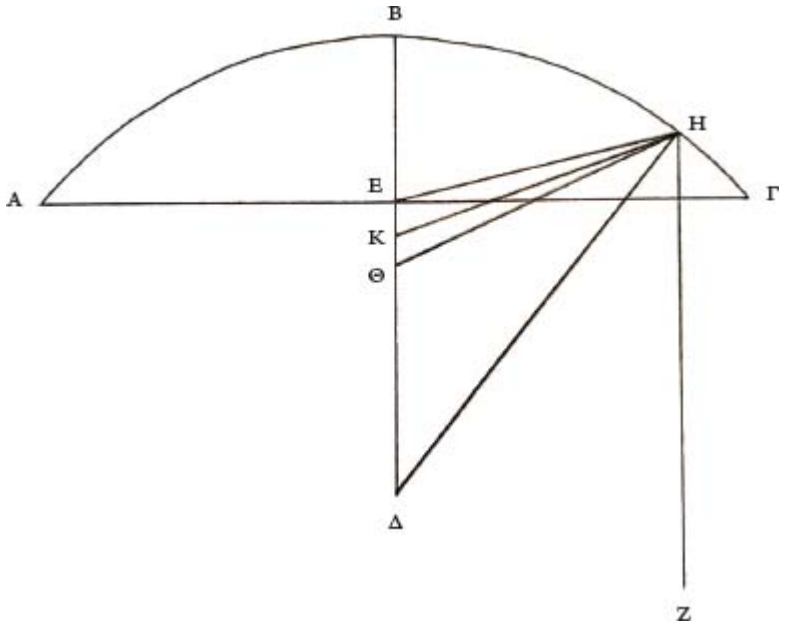


figure 2 Anthemius' spherical reflector, the probable model for the original dome.

Another important difference between the original and current domes is the nature of the reflecting surface on the dome and the presence of supporting ribs on the current one. The original dome was said to be covered by gold mosaic tile, like the mosaic tile structure found in portraits of patrons.

It is likely that the surface of the original dome was similar to the warm and reflective mosaic background of this masterpiece. On the small scale, the mosaic is constructed of gold and glass tesserae. If covered in this material, the dome would have behaved very much like a gold spherical optical mirror. Gold reflects warm light and absorbs blue, giving that glow that makes it especially valuable in jewellery. A dome completely covered with this material, coupled with the likelihood that the surfaces between the windows were also covered, would explain Procopius' report that the original dome seemed to float.

Modern architecture and engineering scholars have performed parametric computer models on what is thought to represent the original dome. The curvature of the current dome is much greater than the original one, destroyed in an earthquake. The greater curvature yields a more structurally sound design, in which the weight of the dome rests more solidly on the supports, rather than pushing them outward. However, this structural stability came with a heavy aesthetic cost. The more tightly curved dome will never enjoy the illumination of the previous one.

GLOSSARY

Acheiropoieta Sacred images not made by human hands but occurring naturally in a material.

Aniconic Non-representational object or image that may serve a symbolic or decorative purpose.

Aporrheton In the context of the mystery cults, secrets concerning which it was forbidden, under pain of capital punishment, to speak.

Arrheton In the context of the mystery cults, the ineffable, unspeakable or unsayable experience of divine epiphany.

Astragal Thin material used, in the context of marble revetment, to frame marble panels and so confer a picture-like quality upon them.

Basilica The common design of Roman civic buildings based upon a long central nave, or naos, leading to a semi-circular recess, or apse, and flanked on either side by galleries separated from the aisle by collonades. The structure may either be single storey or support an additional floor above the side galleries. This form was adopted and became the standard architectural form for churches.

Centre-plan A type of building in which the dome rests upon a circular or hexagonal base. It may incorporate lateral extensions (or transepts) and

be combined with the longitudinal basilican design to be suggestive of a cruciform.

Chôra In Plato's *Timaeus* 48e–52b, the geneatrix of all form which remains, in itself, devoid of all qualities; a shapeless, formless matrix.

Chorós The choral dance was one of the basic forms of competitive performance as well as providing the basic form by which mystery initiations were conducted.

Collonades A sequence of columns joined by arches that serve to support the weight of upper floors.

Diadochus Successor, the title conferred upon the head of the school of Athens.

Entheiadzein (lit.) To experience divine possession.

Epopteía Those repeating initiation into a mystery rite.

Exedra (pl. exedrae) A semicircular recess covered by a semi-dome situated at the end(s) of a basilica's naos.

Heimarmene Destiny or fate.

Henosis Union with the divine.

Hierophant The priest who shows the sacred objects; the principal initiatory figure in the conduct of mystery rites; a position typically inherited through a longstanding family lineage that had been bestowed upon the family by the presiding deity.

Hupodochê (lit.) A receptacle; a word used to describe the Platonic *chôra*.

Kallistos Beautiful.

Mathein To learn, study, be instructed.

Mechanikos Highest grade of mathematician and experimental scientist; an experienced architectural and engineering designer and overseer.

Myesis Preliminary rite of purification; a pre-requisite for undertaking mystery initiation.

Mystae Those who have undergone the preliminary rite of myesis.

Naos Main vault of a building.

Narthex Transverse gallery that provides entry to the body of a building.

Pathein To undergo, be affected by or experience.

Pendentive Triangular shaped segment of a sphere that provides a smooth continuous translation between a square and a circular structure.

Psychopomp A guide of the souls of the dead.

Scholarch The head of a school.

Sumbola Assemblages of objects possessed of a higher order *sunthemata*.

Summetria Symmetry, proportion.

Sunthemata The view that all matter retains a relationship with the higher order realities – the 'intelligible' and 'intellective' worlds beyond the sensible (or material) world – from which they evolved.

Teleisthai To be initiated.

Telete A ritual, though more specifically indicative of a rite of initiation.

Teleutân Dying.

Tessera, (pl. tesserae) The basic structural components of a mosaic; those in the Hagia Sophia were produced by laying either gold or silver leaf between two sheets of glass and then baking, and so fusing, the layers together before cutting the sheet up to make the individual tessera. Each tessera was set at a specific angle into a plaster base covering the interior of the building's domes, semi-domes and embrasures to create gold and silvered reflective surfaces respectively.

Tympana Area under an arch; in the Hagia Sophia the area beneath the dome's load-bearing architecture on the sides of the building are heavily fenestrated and flood the interior with light.

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